Modern packaging

Nominated for *Packaging's Hall of Fame*. Story on Page 88

December 1950

U. S. Government ADHESIVE SPECIFICATIONS

In Chart Form! An authoritative up-to-the-minute chart listing 21 of the principal government specifications that call for adhesives. Each specification is tabulated by symbol . . . description of the item . . . the adhesive application involved . . . *and the adhesive we recommend to do the job.*

This information represents years of close cooperation with a number of government agencies, and covers a wide range of packaging operations from labeling to load palletizing.

Since government specifications are subject to change from time to time, we suggest that you periodically contact our Technical Service Departments for the latest available data. We'll be happy to assist and advise you on current military requirements as well as special applications — anytime!

Address: National Adhesives, 270 Madison Avenue, New York 16, N. Y.

National ADHESIVES

EVERY TYPE OF ADHESIVE FOR EVERY INDUSTRIAL USE

Phoenix Metal Cap Co. Chicago & Brooklyn

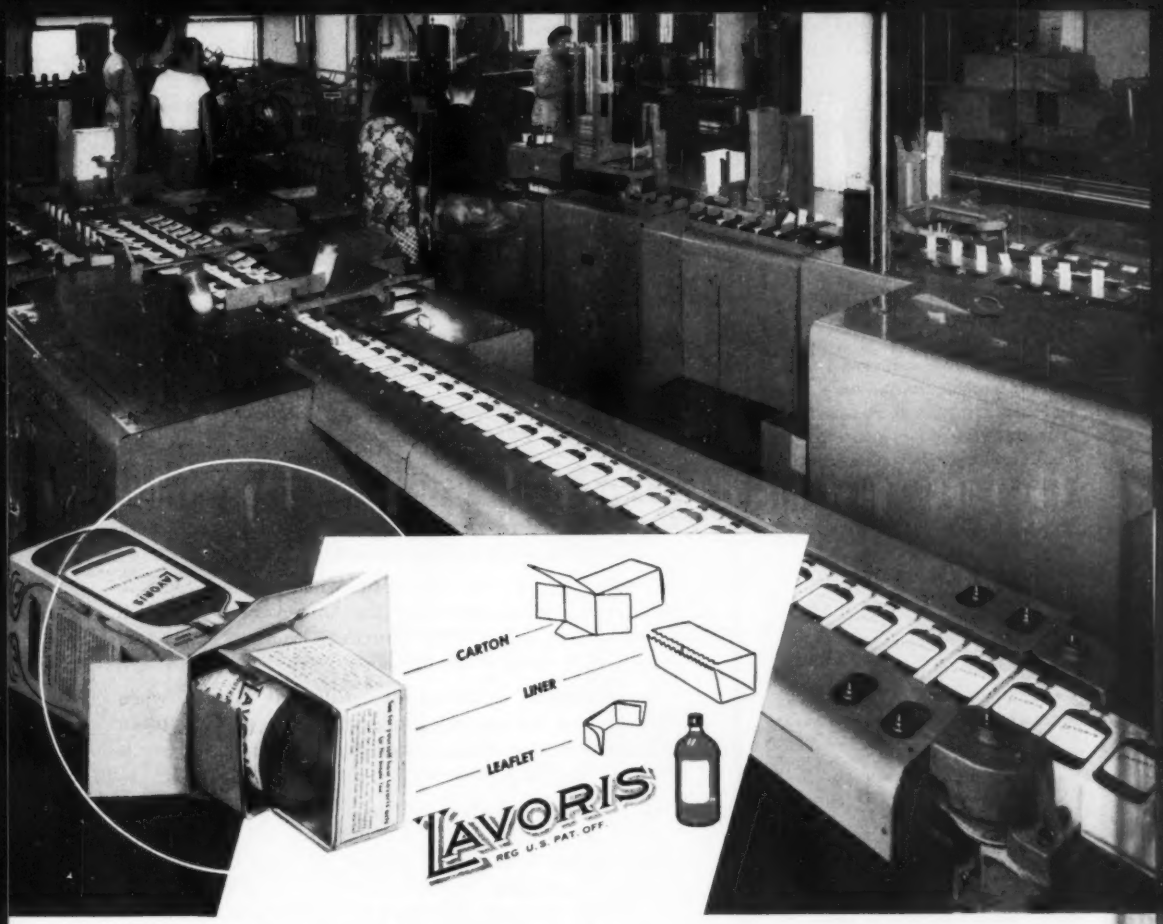
Modern packaging

Vol. 24 No. 4 December 1950

GENERAL

TECHNICAL

DEPARTMENTS



automatically cartoned by JONES

Millions know Lavoris, have bought it for years, and keep the manufacturer hustling to meet the heavy, steady demand.

The entire output of Lavoris is cartoned by two fully automatic Jones Cartoning Machines, in the modern, efficient department shown above. Four sizes of packages, range from 4 to 20 oz. bottles. Each carton contains bottle, corrugated liner and 2-fold leaflet.

The loading operation, in brief, is this:

Bottles pass directly from labeling machine to infeed conveyors of cartoners.

Flat corrugated liners are fed from magazines, are formed by the machines, placed in the buckets.

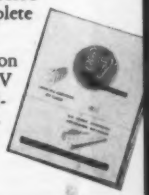
Bottles are transferred by star wheels, gently lowered to horizontal position in the liners.

Flat leaflets are fed from magazines, folded twice, and placed in slots below the buckets.

Folded cartons are fed from magazines, opened, and receive the corrugated liner, bottle and leaflet. Both ends of the carton are glued and the complete package is discharged through compression belts.

As with all Jones Cartoning Machines, the high production is maintained at low cost. Loads are handled smoothly, gently, with automatic stop for incomplete or defective loads.

Either this type of Fully Automatic Constant Motion JONES Cartoner, or the widely adjustable JONES CMV "Constant Motion Vertical" Cartoner with manual loading, will maintain production at low cost and high dependability under the JONES positive guarantee of performance.



Check your own cartoning costs with the report "97 Cost Comparisons of Manual Carton Loading with Automatic Cartoning by JONES Cartoners." This includes a wide variety of carton loading operations. Write for your copy—FREE on request.

R. A. JONES & COMPANY, INC.

Cartoning Machines — Soap Presses

P. O. BOX 2055 · CINCINNATI, OHIO

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BRITON'S-EYE VIEW

Oh wad some power the giftie gie us
To see oursels as others see us!
—ROBERT BURNS

SOME ILLUMINATING OBSERVATIONS from the published report of the British Packaging Team which toured American packaging plants and laboratories early this year. . .

On quality and cost: "The British manufacturer tends to make as well as he knows how, the American makes as well as need be to sell. . . The American package maker and packer offers better value for money."

On efficiency: "Intrinsically small unit savings, when multiplied by the quantity produced, yield very large totals and increase in significance as production expands. Here is efficiency breeding efficiency."

On the mass-production system: "High purchasing power . . . is a result of efficient production of goods and services; each consumer is himself an efficient producer of something else. . . Packaging becomes important as a stimulant to sales because the potential supply tends always to keep ahead of the actual demand. *Demand is created rather than met.*"

On package development: "In America, not to package well and attractively spells ruin for the manufacturer of consumer goods; not to provide able research and a constant succession of new ideas spells ruin for the manufacturer of packaging materials."

On standardization and mechanization: "Standardization in the U. S. is the first step towards mechanization. It is a means to an end, not an end in itself. . . Machinery no longer wears itself out, it works itself out by new developments."

On supplier relationships: "Suppliers are regarded as important allies and not as dependents."

On productivity: "We are satisfied that the average worker in the U. S. toils no harder than his contemporary in the United Kingdom, but his output is higher because of the greater use of mechanized equipment."

The Editors

PURITAN HANGS UP NEW RECORDS on cellophane-wrapped clothes lines

From the moment these brightly packaged clothes lines hit the market, they started setting new sales records and proved a remarkable 3-way success:

1 ***Complete protection,*** **in sealed cellophane, keeps lines fresh and clean, from mill to counter to home.**

2 ***Lower costs*** **for complete unit, wrapped in cellophane, than with old-fashioned paper band.**

3 ***Attractive appearance,*** **gained by colorful printing, accents values that literally push other lines off the counters.**

Working closely with Puritan Cordage Mills, Dobeckmun packaging specialists created and produced these successful wrappers and made practical suggestions which resulted in lower packaging costs.

This is an example of Dobeckmun packaging service. While we cannot make immediate deliveries because of material shortages, we are always ready to work with you in creating new designs for future use; or, perhaps we can show you how to utilize available materials to better advantage. *The Dobeckmun Company, Cleveland 1, Ohio. Berkeley 2, California.*

Dobeckmun

Branches at Atlanta, Boston, Chicago, Cincinnati, Detroit, Los Angeles, Milwaukee, New York, Philadelphia, Portland, St. Louis, St. Paul and Seattle. Representatives everywhere.

MERCHANDISING IMPACT
built on the Facts from Forbes

SING A SONG OF SALES! One of the world's most familiar and best loved faces beams good naturedly from this full-color Chesterfield carton produced by Forbes. Bing sets the tune and you can bet he'll be accompanied by the merry tinkle of cash registers. Cunningham & Walsh, Inc. is the advertising agency for Liggett & Myers Tobacco Co., makers of Chesterfields.

SWEET AND SENTIMENTAL! Traditionally seasonal color schemes distinguish Lovell & Covel's 30x42" Christmas display for their Candy Cupboard. Red, blue and green are used effectively, while the candy box and its contents appear invitingly in full colors. Lithographed in 8 colors by Forbes. Lovell & Covel's advertising agency is C. J. LaRoche & Co., Inc.

MERRY AND BRIGHT! No half-way measures in this striking gift package, lithographed by Forbes for the American Tobacco Company's Half and Half pipe mixture. Emphasis is on red and green, but no less than 6 colors are used to bring out all of Santa's jovial charm — and sales appeal. The advertising agency is BBDO.

FORBES FACTS can help you make the most of your Christmas and other holiday promotions by putting maximum seasonal appeal into your packaging and printed merchandising. Based on long experience, continuing studies and *unique* facilities in lithography, letterpress, web gravure and die stamping under one-roof management control, these facts are always readily available to you. Ask the Man from Forbes.

The old boy is right! Never was his cargo more attractively presented than in the gay holiday garb provided by Forbes. Your own product will gain powerful seasonal appeal, too — when it's *impact-packed by the Facts from Forbes.*

FORBES LITHOGRAPH CO.

NEW YORK · CLEVELAND · BOSTON · CHICAGO · ROCHESTER

Delivers Merchandising Impact

Another new development using

B. F. Goodrich Chemical Company *raw materials*

B. F. Goodrich Chemical Company does not make the decal. We supply raw materials only.

LET an idea-man work with Geon materials, and he'll come up with a new sales-maker! Take the decal pictured here, for example. It's made from Geon paste resin which helps give it these revolutionary advantages.

This decal can be made transparent, translucent or opaque. It adheres to glass and enameled, glossy, painted or metal surfaces—*without* adhesive. A wipe with a damp cloth keeps it clean. It can be easily removed, leaves no mark or stain and is reusable. It can be made in a variety of thicknesses, cut in many shapes, printed in brilliant colors.

And see how economical and versatile Geon paste resin is! You need no heavy or expensive mixing equipment for it; it is easily dispersed in plasticizers. No volatile solvents are required. You can mold, cast, or use it for coating and dipping. And you can get the qualities you want—flexibility, toughness, resistance to aging and abrasion, chemical inertness. Color range is unlimited.

Geon paste resin is used for making coated upholstery, dolls and toys, coatings for plating racks, prosthetic devices, linings for chemical tanks. Its versatility may give you an idea that we can help you turn into profitable sales.

We make no finished products—supply raw materials only. But technical advice is yours for the asking. Just write Dept GJ-6, B. F. Goodrich Chemical Company, Rose Building, Cleveland 15, Ohio. Cable address: Goodchemco.

GEON RESINS • GOOD-RITE PLASTICIZERS . . . the ideal team to make products easier, better and more saleable.

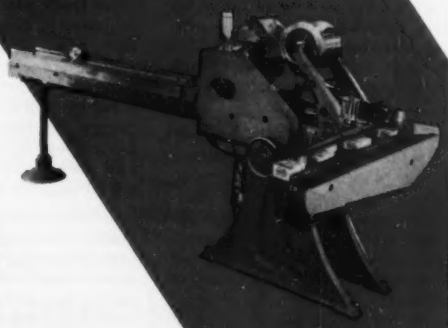
GEON polyvinyl materials • HYCAR American rubber • GOOD-RITE chemicals and plasticizers

Special Purpose Packaging

Cellophane wrapped **MULTI-PAKS**
Color Foil over-wrap for
Holiday Glamour
Both done on a . . . .
Scandia*

Only on a Scandia do you get a wrap with the overlapping folds *on the narrow edges of the packs,* leaving unobstructed the full area on the top and bottom of the package. That's a *better package,* with a worthwhile saving in wrapping material. Opening-tape attachments and electric-eye registration available as optional equipment.

Better consult,—or get details from



Scandia
MANUFACTURING COMPANY

NORTH ARLINGTON NEW JERSEY

*patented under Bronander patents.

What more could you want?

There's real enjoyment in drawing up a comfortable chair and watching your favorite program . . . especially when you have a tasty snack of Delca cream herring or herring in wine sauce . . . man, you're really set!*

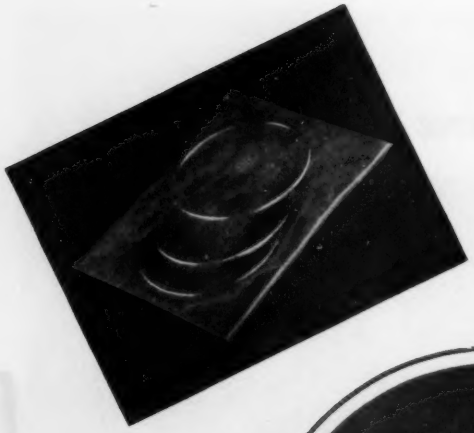
And you're really set for closure satisfaction when you choose Crown Closures. Crown methods of precision manufacture gives these caps a uniformity that means trouble-free application on production lines . . . secure, dependable sealing . . . ease of removal. Crown furnishes a wide variety of liners, *scientifically* selected to meet the individual sealing requirements of any type of product.

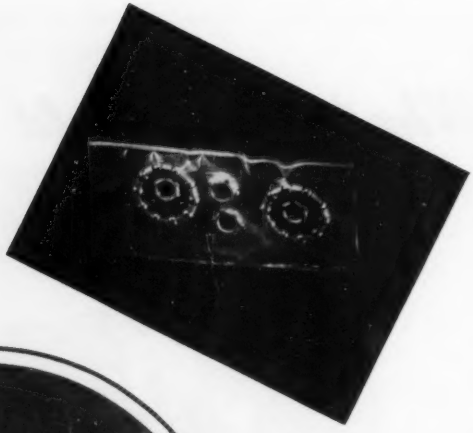
Yes, Crown Closures are more than just ordinary closures . . . when you use them you're *sure* they're "right" for your product. What more could you want? Crown Cork & Seal Company, Baltimore 3, Md. *World's Largest Makers of Metal Closures.*

CROWN CLOSURES

Approved by millions of housewives

*Delca fish products are packed by Delca Fish Preservators, Inc., Brooklyn, N. Y. Those shown here are sealed with Crown Screw Caps . . . the closure with the famous Deep Hook Thread.

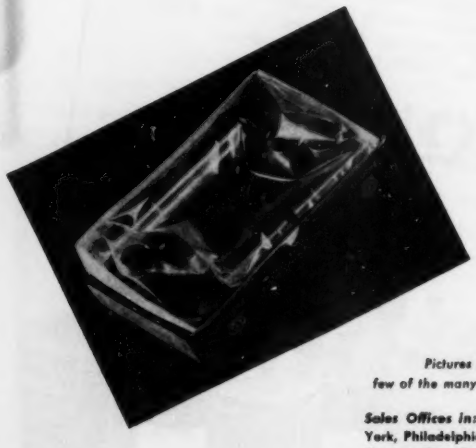


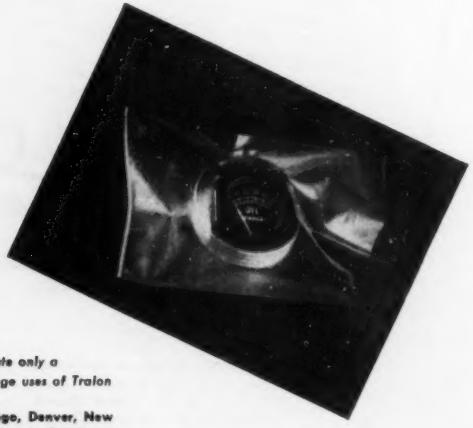


We are Ready to Serve You...

Traver
CORPORATION
366 WEST ONTARIO STREET
CHICAGO 10, ILL.

TRALON is the solution for problems connected with corrosion packaging. Tralon is a completely stable inert Polyethylene film ideal for overseas shipments. Meets many Government specifications. It is moisture-proof, dust-proof, grease-proof and immune to acids and alkalies. Tralon also meets all food packaging requirements. For complete information contact your Traver Salesman today.





Pictures illustrate only a few of the many package uses of Tralon

Sales Offices in: **Chicago, Denver, New York, Philadelphia, Pittsburgh, Cleveland, Kansas City, St. Louis, Dallas, Detroit, Oakland, Houston, San Antonio.**

CONVERTERS AND PRINTERS OF CELLOPHANE, PLASTICS, ACETATES, FOIL, GLASSINE

NEW "EYE-FULLS" of SALES APPEAL

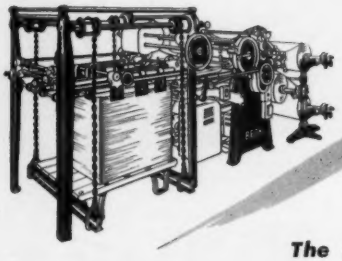
YOU are looking at the first new departure in the canning of syrup for many years . . . a completely redesigned line of lithographed metal cans by Heekin. The lithographed metal picnic basket is just another proof of the versatility of Heekin's color lithography and package design. If you are looking ahead perhaps some one from Heekin can look ahead with you. Ask us . . . There's no obligation.

Heekin

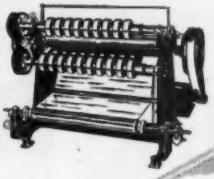
BEAUTIFULLY LITHOGRAPHED **CANS**

THE HEEKIN CAN COMPANY, CINCINNATI 2, OHIO

How a plastic converter turned his problems into PROFITS



Production costs were rising with no increase in output. 6 cutters worked by hand on 4 large tables. Outside slitting added extra expense. Production profits were slipping badly — action was essential.



The solution was simple when cutting was turned over to a BECK SHEETER and a BECK SLITTER. Labor costs are halved, slitting charges are eliminated and cutting occupies only 1500 sq. ft. rather than 4,000. Production is smoother, with only 1 machine operator, 2 helpers and 1 table.

BECK

BECK has your production profit answers, too . . . answers that make output climb and costs decline. The BECK AUTOMATIC ROLL SHEET CUTTER sheets anything quickly and accurately from rolls . . . the BECK RAZOR BLADE SLITTER AND REWINDER is an unbeatably economical, dependable performer on all fine materials.

BECK SHEETER and SLITTER Catalogs are packed with facts on machines to beat your production problems. Get yours now!

CHARLES BECK MACHINE CORPORATION

406 NORTH 13th STREET BECK PHILADELPHIA 8, PENNA.

Inspiration knows no limits with SYLVANIA CELLOPHANE

Whatever form your packaging takes—there is a Sylvania Cellophane to give it sparkling beauty and indispensable protective qualities at low cost. Sylvania presents a whole family of truly transparent films, each tailor-made for a particular job.

It comes with controlled moisture protection—in different gauges. It heat seals strongly and instantaneously either in handwrapping or on high speed automatic equipment. It can be economically printed on fast rotary presses with lustrous color effects.

Your Sylvania representative will help you choose the one that exactly fits your requirements. Talk over your problems with him or write us mentioning the specific application in which you are interested. Address: Market Development Dept. MP-12

SYLVANIA® CELLOPHANE

SYLVANIA DIVISION AMERICAN VISCOSE CORPORATION

Manufacturers of cellophane and other cellulose products since 1929

General Sales Office: 1617 Pennsylvania Blvd., Philadelphia 3, Pa. *Plant:* Fredericksburg, Va.

TEAMWORK

Close cooperation with carton buyers—

through the years—has produced the seasoned experience

to assure you the finest in folding cartons.

for the best letterpress or gravure

CHICAGO CARTON COMPANY

CHICAGO CARTON COMPANY

4200 SOUTH CRAWFORD AVENUE • CHICAGO 32, ILLINOIS

FOLDING CARTONS • PLAIN • PRINTED • LAMINATED • PARAFFINED


The Handiest
Bottle Ever Made!
Manufactured Under Pat. No. 2,515,093
Other Patents Pending
ELMER E. MILLS CORPORATION'S
Polyethylene
Plastic Bottle
This is *the* bottle with consumer appeals so strong they actually help sell your product!
It's unbreakable—a powerful consumer selling point on safety and thriftiness.
It's lightweight—takes up less space (and incidentally cuts your shipping cost).
It's a "squeeze bottle"—can be readily adapted to use as a stream—as a spray—as a sprinkler finish.
Our stock bottle is available in 1—2—4—8 ounce sizes. Through a special printing process we can print your label or design right on the bottle.
In addition to the production of this stock bottle and stock closure, we also custom make other thermoplastic bottles, closures and atomizers. You can depend upon their being made with the same high standards of craftsmanship which keynote all Mills plastic products.
For more information on our custom molding service, or for a free sample bottle, write us or our sales agent today.
ELMER E. MILLS CORPORATION
2930 N. Ashland Ave., Chicago 13, Illinois
Sales Agent: W. BRAUN & COMPANY
Chicago, 300 N. Canal St. New York, 595 Fifth Ave.

U.S. Automatic Machines
FILL YOUR PACKAGES BEST

THE MODEL TBS
For Automatic Tablet or Pill Counting and Filling

The fully automatic Model TBS fills bottles, cartons, boxes and other rigid containers with any desired count of pills, tablets and capsules unerringly and rapidly. It mechanically counts and drops tablets into the container, producing up to 150 filled bottles or boxes per minute depending upon the count. Because of its unique and simple design, it may be economically, easily changed over to suit a wide range of requirements.

THE SCOTT NET WEIGHER
For Packaging Free-Flowing Materials

For weighing and filling free-flowing and semifree-flowing materials into cans, bottles, cartons or bags, Scott Net Weighers have no equal for speed and accuracy. A single Dump Scott Net Weigher will operate semiautomatically at speeds up to 35-40 packages per minute; automatic units up to 60 per minute. Scott Scales are made in several sizes and types to suit product and weight specifications.

THE BOND FILLING MACHINES
For Nonfree-Flowing, Powdered and Granular Materials

Semiautomatic and fully automatic high-speed Bond Fillers handle a wide range of nonfree-flowing or dusty materials, filling at speeds up to 120 packages per minute. Bond Auger Filling machines with one, two or four filling stations are available for volume filling, gross weighing or packing.

THE MODEL C-10-CC
For Cartoning Candy

This versatile machine is receiving wide acceptance in the candy industry. It is possible on the one machine to fill an entire range of candy items without the use of extra equipment provided the same size carton is used. The C-10-CC automatically opens flat folded cartons, tucks bottoms, cuts, forms and inserts liner, volume fills candy, then folds and tucks liner top flap of carton. The liner may be omitted when desired.

These and other machines manufactured by **US** will fulfill your requirements for packaging machinery. It will pay you to discuss your problem with **US** as it has the packers of the containers shown. Write **US** today.

US NET & GROSS WEIGHING ★ PACKAGE FORMING & FILLING ★ CARTON SEALING, LINING, WRAPPING ★ BOX MAKING

AUTOMATIC BOX MACHINERY CO., INC.

Owning and Operating NATIONAL PACKAGING MACHINERY CO. ★ CARTONING MACHINERY CORP.

122 ARBORETUM ROAD, ROSLINDALE, BOSTON 31, MASS.

Branch Offices: New York ★ Cleveland ★ Chicago ★ San Francisco (Mailler Searles, Inc.)

why are so many

Milprint packages so successful?

A successful package starts with your

Milprint salesman who has helped develop many saleswinning packages in a great variety of industries. He interprets your packaging problem to

Milprint merchandising men whose wide experience in manufacturing, sales management and merchandising contribute a special combination of talents to the development of your package. Their merchandising suggestions are brought to life by

Milprint designers who have created the art treatment for thousands of successful packages. They have a practical knowledge of packaging materials and printing processes. But their special ability is knowing how to combine color, sales elements and design to put more "sell" into your package. Once the design has been completed and okayed

Milprint production men who have helped develop many Milprint packaging "firsts" carefully guide the final steps in building a successful package for you. Inventors as well as skilled craftsmen, they have designed much of the modern converting equipment used in Milprint's fourteen great plants.

This is the Milprint team, men who know how to build successful packages. Their 50 years of packaging experience can help make *your* package do a better selling job.

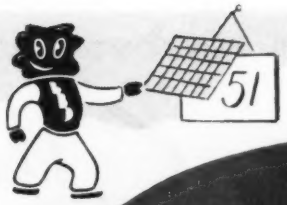
Call your local Milprint man, or write today. No obligation.

Printed Cellophane, Pliofilm, Acetate, Glassine, Plastic Films, Foils, Folding Cartons, Lithographed Displays, Printed Promotional Material.

Milprint INC
PACKAGING MATERIALS
LITHOGRAPHY & PRINTING

General Offices, Milwaukee, Wisconsin
Sales Offices in all Principal Cities

This Insert Printed by Milprint, Inc.



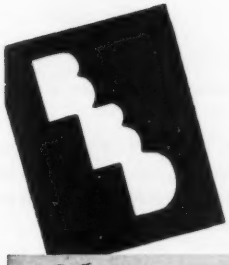
Coming in '51...

THE EXCELLOPAKE 400 SERIES

A new, improved line of

BBD Aniline Inks

with exclusive features of importance to printers of all types of CELLOPHANE, FOIL and other specialty stocks



Watch for next month's announcements

Bensing Bros. and Deeney

LARGEST MANUFACTURERS OF ANILINE INK IN THE WORLD

New modern plants to serve you better

In PHILADELPHIA

. . . newly constructed 1-acre plant and home office

In CHICAGO

. . . newly enlarged to 3 times its former size

401 N. Broad St., Philadelphia 8, Pa.
81 Albion Street, Wakefield, Mass.
2358 N. Seeley Avenue, Chicago 47, Ill.

Export Division: McLaurin-Jones Co., New York 17, N.Y.
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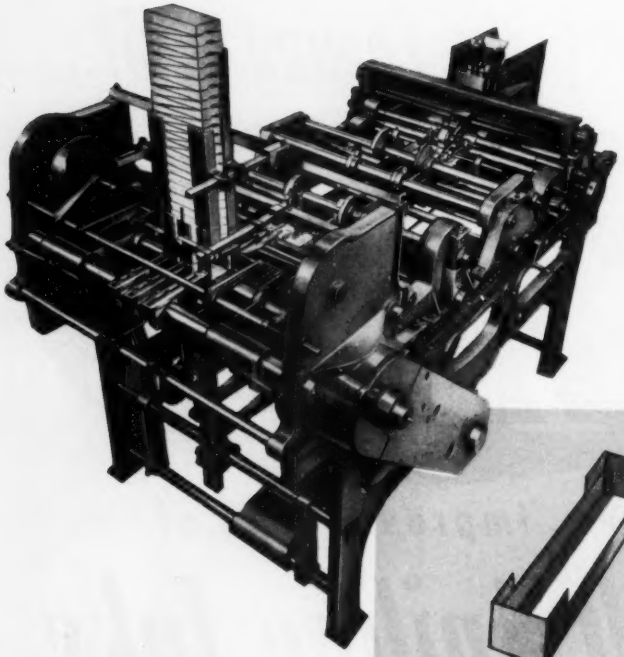
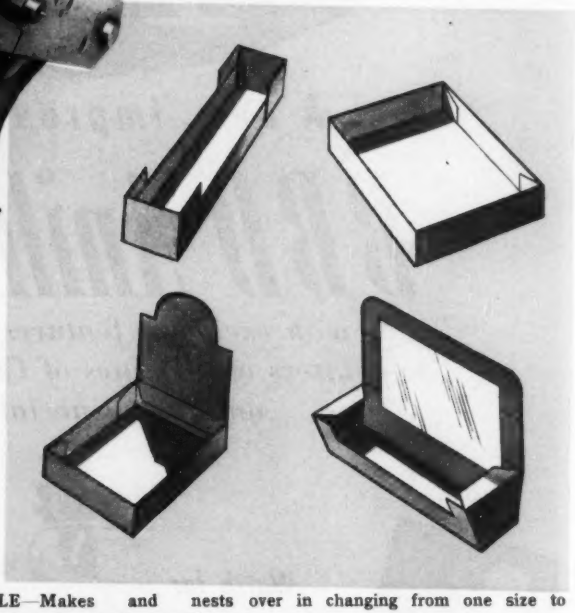


Save

ON YOUR BOX FORMING OPERATIONS



WITH THE

INT-O-MATIC

BOX FORMING MACHINE

MODEL 3JC

GREATEST ACCURACY—The Int-O-Matic forms boxes with the greatest accuracy—square corners.

HIGH SPEED—up to 120 pieces per minute.

LOW SPOILAGE—Operates with the lowest percentage of spoilage of any set up unit.

VERSATILE—Makes and nests tapered boxes either with or without cover. Makes and offset nests straight sided boxes either with or without cover.

QUICK CHANGEOVER—Average one hour. Unnecessary to make machine over in changing from one size to another.

DELIVERS THREE WAYS—(1) Individually onto an apron. (2) Nested and returned to the feeder. (3) Offset nested vertically in counted lots.

International makes many other setting up machines for various types of packages. Perhaps we have just the machine to solve your box forming problem. Why not investigate today?

The INTERNATIONAL PAPER BOX MACHINE COMPANY

315 MAIN STREET
NASHUA, NEW HAMPSHIRE

you get

SPARKLE plus

proven product protection with packages of

ALCOA

ALUMINUM FOIL

No salt shaker stickiness for users of Du Pont Motor System Cleaner. Alcoa Aluminum Foil, laminated to cardboard, bars moisture-vapor absorption—keeps these efficient auto radiator granules free flowing, prevents caking in the carton.

Beyond protection, this sparkling aluminum wrapper* spotlights the package on dealer's shelves—adds lustre to a name long famous for adherence to highest product standards.

Because of its many possible applications, leading manufacturers—*in many fields*—have found Alcoa Aluminum Foil the answer to their packaging problems. ALUMINUM COMPANY OF AMERICA, 1760M Gulf Building, Pittsburgh 19, Pennsylvania.

*Wrapper by Allegheny Label Company

ALCOA
A
C
ALUMINUM
O
A

Which of these packaging ideas gives you an idea?

All are from Gardner's "Case History" files. Study them. They may suggest how Gardner can add extra point-of-sales punch, lower handling and selling costs, increase unit and impulse sales, or give an "up-front" display push . . . to your product.

A carrier for six tumblers . . . filled with sales punch! This Gardner-designed carton for The Federal Glass Company not only makes an eye-catching display . . . it also assures a safe trip home, without bothersome wrapping and packing. Best of all, it turns "we need another drinking glass" into "let's take six of these."

Carries 5 quart cans . . . 5 economy-sized advantages! More multiple sales . . . better display . . . fool-proof separation of easily-mixed SAE weights . . . lower handling costs . . . faster sales floor transactions. Those are the five big advantages Gardner designed into this motor oil carry-out carton for Montgomery Ward.

Package with a purpose . . . and a future! Gardner designers are old hands at producing do-more-than-one-job cartons. This Sears, Roebuck & Company folder protects Workmaster Paint Brushes from dust or dirt, curling or warping . . . adds point-of-sale luster (snap-fastener permits easy inspection) . . . and becomes a handy container for storing the brush between paint jobs.

From shipper to florist to customer . . . handling time is cut as short as the stem on a 15c rose . . . and flowers are delivered greenhouse-fresh. Now, thanks to Gardner's help in developing a special carton for the Berthold-Grigsby Company, Cleveland, flowers can be pre-packaged like any other consumer item!

Cash registers played "Jingle Bells." Last Christmas, smart merchandisers figured this carton packed plenty of "sell" . . . gave it premium space on crowded tobacco counters. Result? Kentucky Club's sales were 'way above average . . . and The Mail Pouch Tobacco Company credits much of that success to this clever, Gardner-designed carton.

Single carton . . . double-header sales! Here's a "toughie" for tie-in packaging . . . Seaforth's stoneware jug and a collapsible metal tube. Gardner's solution: this ingenious pick-a-back carton, designed for Alfred D. McKelvy Company. Plenty of "extra-ply" protection for both containers . . . plenty of "extra-buy" appeal for counters and shelves.

UNTOLD WEALTH

. . . may lie buried beneath the surface — needing only knowledge for its development. An idea, too, may need only the technical knowledge to turn it into a highly salable product. Columbia will be happy to put that knowledge at your service.

Columbia

CUSTOM MOLDERS OF PLASTIC PRODUCTS AND SPECIAL PLASTIC PACKAGING

COLUMBIA PROTEKTOSITE COMPANY, INC. • Carlstadt, New Jersey
New York Showrooms: Empire State Bldg. • West Coast Office: 380 Bayshore Blvd., San Francisco, Calif.

ONE OF AMERICA'S LEADING MANUFACTURERS OF SUN GLASSES, COMBS, BRUSHES, TOYS, HOUSEWARES

Strike it Rich...

- Smoother Finish
- Superior Brilliance
- Easier Printing
- Resists Tarnish
- Withstands Rubbing
- Non-Curling

with Newly-Improved *Old Tavern*

Gold and Platinum Box Coverings

To inexpensively achieve richer, more distinguished packaging appeal that will bring new business to your door — discover Old Tavern — the treasure of all metallics.

Newly-improved for even greater packaging brilliance, famous Old Tavern Metallics assure you of finest quality at the price. Their smooth, glittering surface is casein-coated and takes line or halftone illustrations as readily as coated paper. A wide variety of attractive embossings lend distinctive character to any product.

Write today for a handsome sample folder you'll be proud to show your customers.

Other McLaurin-Jones Products
Famous For Fine Quality

GUARANTEED
FLAT GUMMED PAPERS

All colors — all finishes for every printing purpose

WARE Delayed Action HEAT SEAL

For unexcelled label work on many difficult surfaces

Ware TONE

Mirror Finish — Craftsman Quality Perfection in Coated Paper

A McLAURIN-JONES Product

McLAURIN-JONES COMPANY

BROOKFIELD, MASSACHUSETTS

Offices • New York • Chicago • Los Angeles

"CUTTING SUGAR CANE"—AN ORIGINAL LITHOGRAPH BY HENRY E. WINZENREID

Filling America's Sweet Tooth

Sugar . . . and the countless things made with it . . . travel a long road from cane to consumer. Along the way, "sweets" need the help of protective papers to guarantee their wholesome goodness. These needs are often met with special Riegel Papers . . . tailor-made for the functional packaging of such products as candy, cake, chewing gum, ice cream, sugar and prepared desserts.

There's a Riegel Paper for almost any requirement you may have in protective packaging . . . a paper you can depend on for economy and production efficiency. We feel sure we can serve you in the same effective manner we now serve the sales leaders in so many different fields. Write us today.

Riegel Paper Corporation • 342 Madison Avenue, New York 17, N. Y.

Riegel TAILOR-MADE PAPERS FOR PROTECTIVE PACKAGING


Just what they wanted for Christmas
Holmes + Edwards
Merry Christmas
Coty Doll
Seagram's
Gin
"Pot o' Gold"
by
Graceline
SHAW-RANDALL CO., INC.
PAWTUCKET, R. I.
New York Office – 545 Fifth Ave.

When you want the BEST go to the BEST

And for Packaging it's GLASS

The transparent glass package displays your products with all their colorful eye and appetite appeal. High in chemical durability, it does not change their taste or aroma, will not rust, corrode or leak. Easy to open, easy to use, easy to reseal to protect unused portions, it makes the most convenient package. It lends itself to individuality in size and shape, hence is adaptable to any product. Preferred by consumers because it is sanitary and convenient . . . by retailers because of its sales and merchandising advantages. Select your source of supply for glass packages as carefully as you would a surgeon, attorney or other specialist. Anchor Hocking Glass Corporation, Lancaster, Ohio.

Anchorglass*

SOLUBLE COFFEE AND TEA JARS

Pack your soluble coffee and soluble tea products in strong, durable *Anchorglass* Jars. They are designed especially for ease of handling, easy access to contents, efficient product protection, economy and display in packaging and merchandising your products. *Anchorglass* Containers are the result of carefully selected and controlled raw materials, consistency in manufacture, uniform distribution of glass, accurate annealing, quality control through laboratory tests and regular inspections. They are uniform in height, diameter and finish. But whether you pack soluble coffee, tea or other food products, there are *Anchorglass* Containers in styles, capacities and colors that will meet your requirements.

ANCHOR

AMERSEAL® CAPS

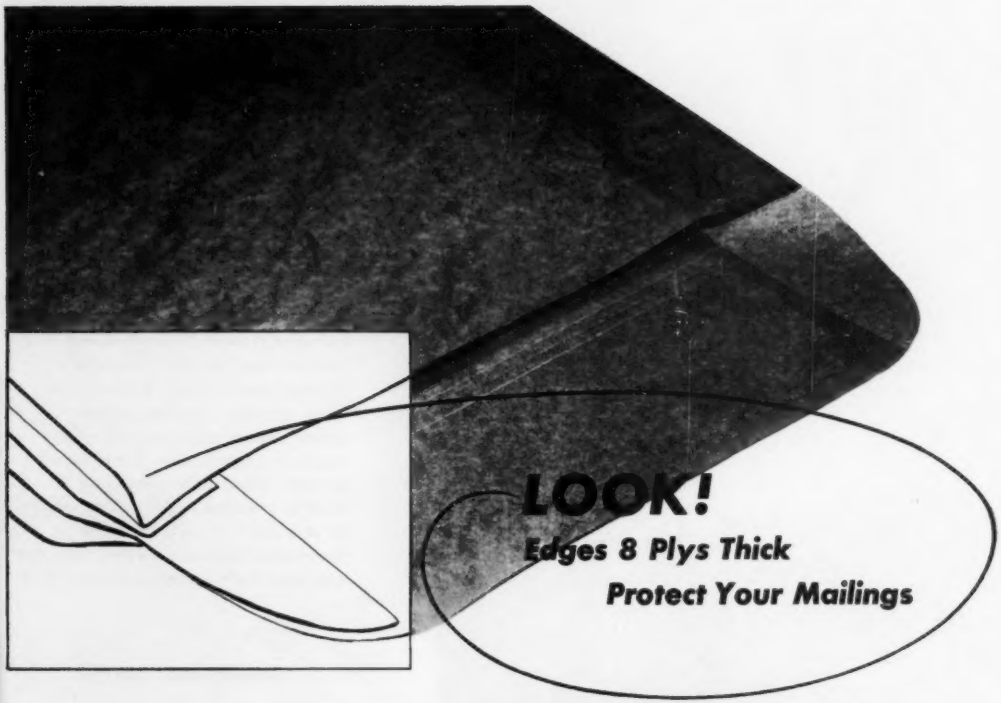
Seal frequently used food products with easy off-and-on *Anchor* Amerseal Caps. A quarter-turn, a simple twist of the wrist and the Amerseal is off. A quarter-turn and it seals again—an ideal closure for soluble coffee, tea and many other products that are opened many times before they are all consumed. *Anchor* Amerseal Caps are adaptable for use with all products requiring a dependable airtight seal and not affected by bacterial decomposition. They are available in 18 sizes from 20 to 120 mm. Let us tell you more about the advantages and economies of *Anchorglass* Containers and *Anchor* Amerseal Caps.

*Trade-Mark

For the BEST in Glass Packaging *it's*

ANCHOR HOCKING

"THE MOST FAMOUS NAME IN GLASS!"



ANDREWS

Armor-Edge Mailer

Eliminates nearly all mail damage losses

for magazines

for ad mats

for booklets and reports

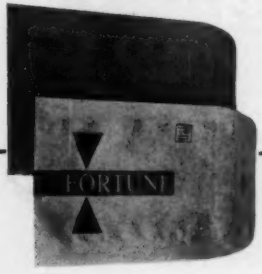
for flat packages of every sort

The present limited supply of paper may prevent us from serving you immediately. However all inquiries will be given attention in order of their receipt.

Printed matter and merchandise shipped in Andrews Armor-Edge Mailers* are given positive damage protection by eight plys of heavy, glue-reinforced Kraft paper along the *two vital edges.* This superior protection is yours at a cost that compares favorably with other mailers which offer far less safety.

Developed originally to safeguard top-quality magazines, Armor-Edge Mailers find additional use wherever flat printed matter and merchandise needs insulation from the rigors of mailing.

Sizes and flap styles are designed to order. Why not ask for sample Armor-Edge Mailers. Then you'll be able to evaluate their merits yourself.

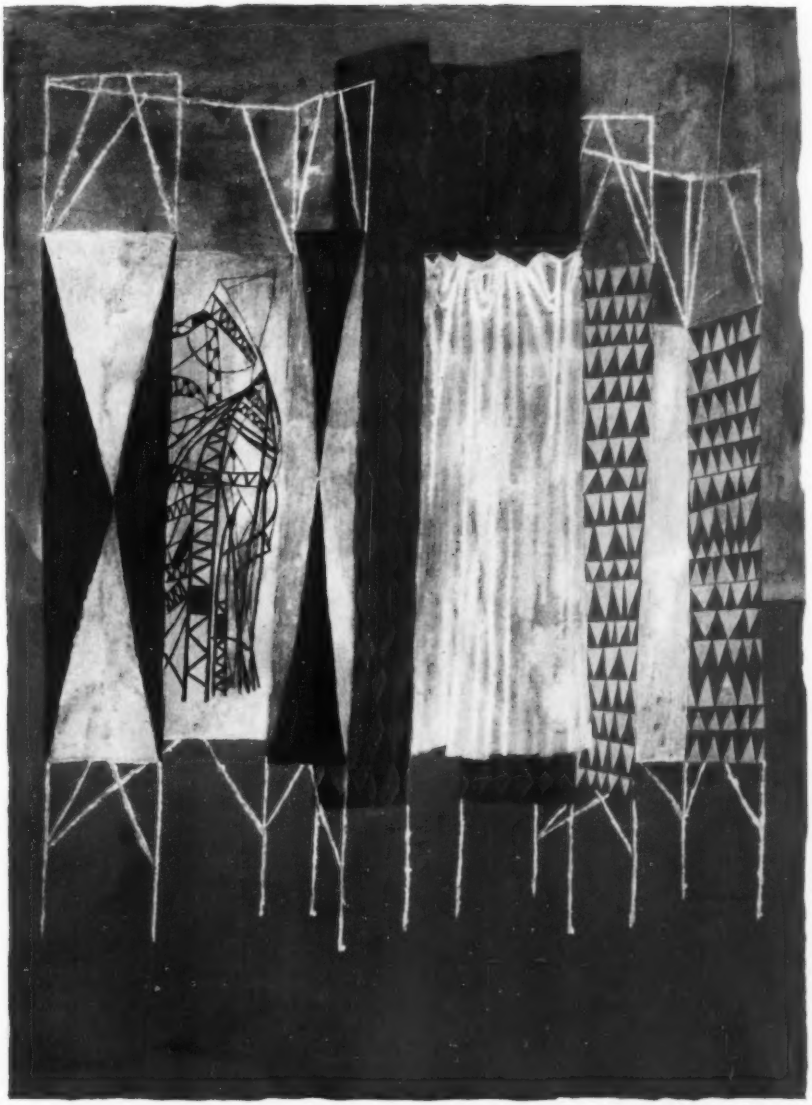


* PATENT PENDING

P. L. ANDREWS CORP.

1328 Broadway New York, N. Y.

Manufacturers of a complete envelope line for over 30 years

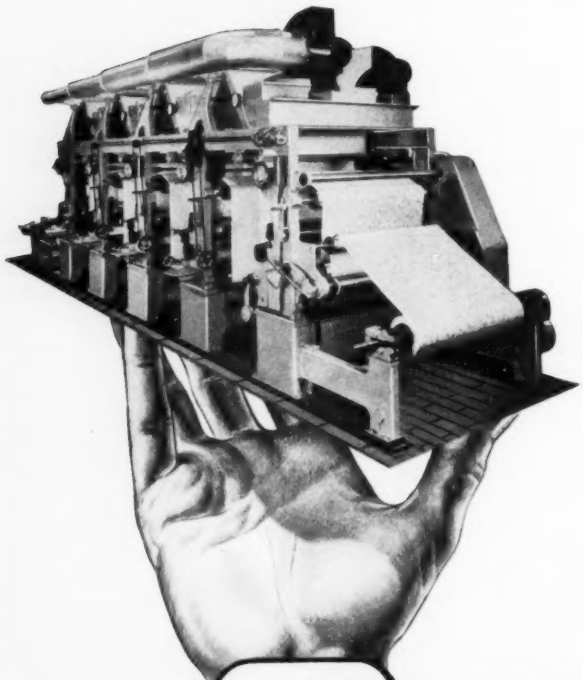


"THE VOTING BOOTHS": BEN SHAHN

John Locke on the purpose of government

The end of government is the good of mankind ... and which is best for mankind, that the people should be always exposed to the boundless will of tyranny, or that the rulers should be sometimes liable to be opposed when they grow exorbitant in their power, and employ it for the destruction and not the preservation of the properties of the people?

SUPREME *in the rotogravure field!*



ATF KLINGROSE

PA Four Color Rotogravure Press

Here is the ideal press for the ultimate in printing gift wraps, labels, bread and candy box wraps. It is built on the unit basis to print up to eight colors on one or both sides of the web at operating speeds up to 600 feet per minute. This press has many exclusive features designed to increase efficiency, speed, economy, accuracy and accessibility.

Delivery is in rewound rolls, separate sheets, or folded signatures.

Complete specifications will be furnished by request on your letterhead.

These two handy guides are yours for the asking

ATF *Cylinder Calculator* shows diameter of cylinder circumferences from 1″ to 60″, in steps of $\frac{1}{8}$″, calculated to third decimal.

ATF *Hourly Production Tables* are for cylinders from 12″ to 48″ in circumference, running from 100 to 850 feet a minute.

American Type Founders

Klingrose Gravure Division 150 TWENTIETH STREET
BROOKLYN 32, NEW YORK

May Holiday Joy Be Yours Year Round

HAZEL-ATLAS GLASS COMPANY

—hard to see! No display value! Being in the display business . . . we say *scat* to 'em. Our line is honest-to-goodness, can't-be-missed point of purchase selling aids. The kind that get up, stay up —and sell, sell, sell—night and day. Our merchandising people dig up the facts about your product. Then our creative staff designs your display, package or label—and endows it with 9 full cat lives of high-powered selling. To make sure your point of purchase program is producing, consult the Man from Consolidated.

A high-fashion display for ACE Elastic Hosiery that gets drug store window showings for this therapeutic product of Becton-Dickinson's. Display created, and lithographed in full color, by Consolidated Litho. Plastic leg form by Frankel Plastics Co.

Gotham re-packages: the smart, luxurious looking new wrap (right, above) is a real prize winner. As re-designed and produced by Consolidated, it is lithographed in sparkling blue, gold and black. Gold is embossed to simulate weave—and appearance—of actual hose.

CONSOLIDATED *Lithographing Corporation*

MEMBER OF THE POINT OF PURCHASE ADVERTISING INSTITUTE

Main Office and Plant: 1013 Grand Street, Brooklyn 6, N. Y.

Sales Offices in Philadelphia, Chicago, Louisville and Tampa.

OUTSTANDING FOR RESULTS AND ECONOMY

PAPER COATINGS MADE WITH NATURAL RUBBER PLIOLITE

Excellent Resistance to WVT (water vapor transfer)

Good Crease Resistance

Good Anchorage to Various Paper Stocks

Good Heat Seal

Needs Only One Solvent

YOU get better moisture-resistant paper coatings with Goodyear's **Pliolite NR**—because it's made from the highest grade of low-protein-content natural crepe rubber, treated with reagents to form the only cyclized rubber-resin product of its kind on the market today.

In addition to moistureproofing papers, **Pliolite NR** is being used successfully in a wide range of industrial applications. For assistance in its application to your problem—full details—samples, write:

GOODYEAR, CHEMICAL DIVISION
AKRON 16, OHIO

Pliolite—T. M. The Goodyear Tire & Rubber Company

PLIOLITE NR

Pliolite NR starts with the finest grade of pure rubber crepe, shipped from the plantations in bales like those shown here.

SEAL IN FRESHNESS

with PLIOLITE NR

Pliolite NR coated papers—either glassine or kraft—have the high gloss and firm, hard feel that bring added sales appeal to your product. In addition, you get all these advantages when you coat with **Pliolite NR:**

Excellent Water Vapor Transfer Resistance—**Pliolite NR** has excellent resistance to passage of water vapor, compared with other well-known coatings.

Good Crease Resistance—multiple creasing of **Pliolite NR** coated stocks does not affect WVTR as drastically as it does other coatings.

Good Anchorage to Various Paper Stocks—coatings will not strip, and when heat-sealed are more than strong enough so that paper will tear before seal fails.

Good Heat Seals—quickly made with a hot iron in the range of 275° to 300°F. Degree of heat seal depends on attaining this temperature range.

High Gloss, Freedom from Blocking, Good "Slip" add to appearance and handling characteristics.

Single Solvent—makes for simple manufacture, ease of solvent recovery, ready regulation of viscosity of **Pliolite NR** coatings.

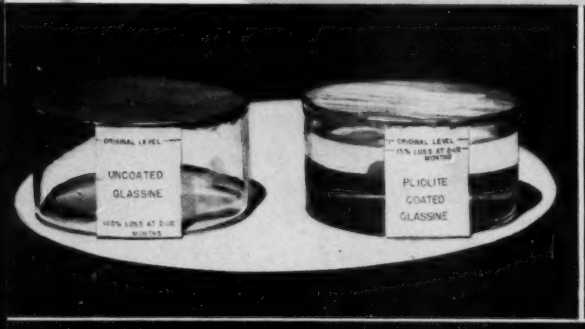
Simple Formulation—needs no extensive modification to attain most-desired characteristics in paper coatings.

Economical—low density makes possible coatings of same thickness as other materials, using fewer pounds of coating per ream.

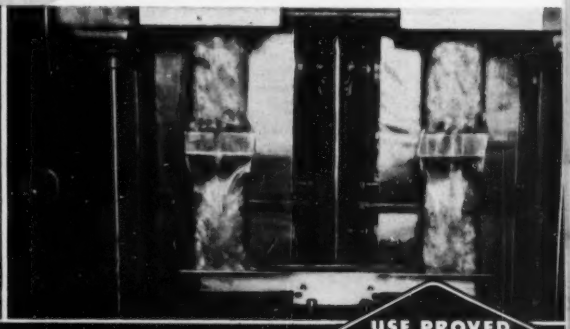
Excellent Stability—**Pliolite NR** coatings have maintained good WVTR and good heat seals over long periods.

Check over these advantages. Compare them with the present coating material you're using. You'll see why packagers everywhere have switched to **Pliolite NR.**

Uncoated glassine permits 100% evaporation of water after 2½ months. Pliolite NR coated glassine retained 85% of water.



Standard Packaging Machinery *heat seals Pliolite NR coated glassine in making popcorn bags.*



USE PROVED *Products*

GOODYEAR

UNCOATED STOCK

COATED WITH PLIOLITE NR

There are a lot more where these came from!

Here's just a sampling of the dozens of different kinds of cans made by Continental. We're sure we have one that could have been tailor-made for your product. Why not put your packaging problems up to our technical staff. They know how to fit packages to products, shipping requirements and sales conditions. And our lithographers have an old-fashioned pride in their work that shows up in crisp, colorful designs. With plants strategically located from coast to coast, we sincerely believe we can give you a new idea of service. Give us a call!

You can't beat Continental as a dependable source of supply!

CONTINENTAL CAN COMPANY

Eastern Division: 122 E. 42nd St., New York 17 Central Division: 135 So. La Salle St., Chicago 3 Pacific Division: Russ Building, San Francisco 4

Meet the BEMIS Small Bag Family

These Bemis Bags belong on your packaging team. Here's why: They fill and pack economically. That helps your costs. They give unbeatable display to your brand. That helps your sales. They are good packages and consumers realize it. And that helps everybody.

Get the full details of the Bemis small bag story. Ask the Bemis man.

A Winner for You

Bemis DELTASEAL Bags (flat-tube) have the exclusive Pull-Cut-Pour Spout. The white coated or bleached paper makes your brand stand out on all sides. The squared shape makes for eye-filling mass displays. Blue-lined, if you prefer, (makes white flour look whiter).

Bemis Flexi-Carton—Intuck bags that square up beautifully and billboard your colorful brand all around. Like Deltaseal, these are economical bags worthy of your good product. A variety of types of closures available.

Bemis CELLOPHANE Bags are increasingly preferred for meat and granular products. Cellophane is a showcase for your merchandise . . . really turns the spotlight on it. And the brilliant color printing on Bemis Cellophane Bags shouts for attention...you must see it!

There is a Bemis Plant or Sales Office near you—

Baltimore • Boise • Boston
Brooklyn • Buffalo • Charlotte
Chicago • Cleveland • Denver
Detroit • East Pepperell
Houston • Indianapolis
Jacksonville, Fla. • Louisville
Kansas City • Los Angeles
Memphis • Minneapolis
Mobile • New Orleans
New York City • Norfolk
Oklahoma City • Omaha
Peoria • Phoenix • Pittsburgh
St. Louis • Salt Lake City
Salina • San Francisco
Seattle • Vancouver, Wash.
Wichita • Wilmington, Calif.

Bemis

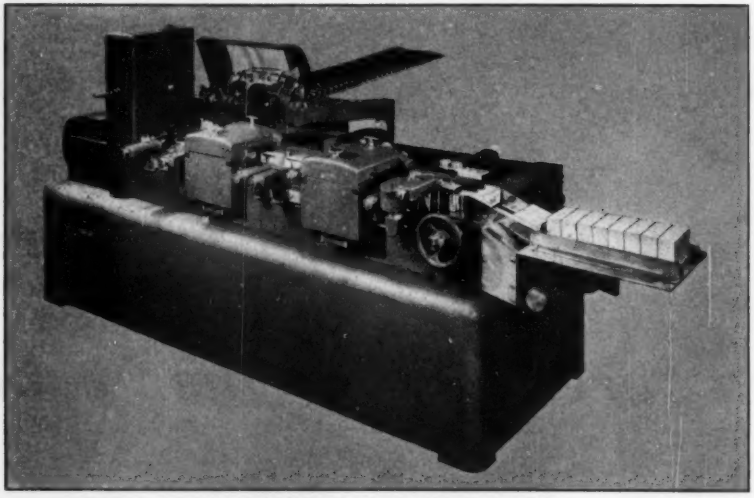
BEMIS BRO. BAG COMPANY

Whatever their size or shape, boxes, cartons & caskets are transformed in appearance when dressed in the brilliant rainbow colours of Fisher's Aluminum Foil.

Whether your product has dignified class appeal or is intended for the mass markets, you will find in the wide Fisher range hundreds of scintillating new designs and colour combinations suited to your needs, or special printings to your own design and wording can be promptly arranged. Send to-day for samples, prices, and technical information.

FISHER'S FOILS LIMITED WEMBLEY MIDDLESEX ENGLAND
TELEPHONE: WEMBLEY 6011 CABLES & GRAMS: LIOFNIT, WEMBLEY (ABC CODE 6TH EDN)

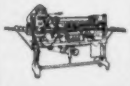
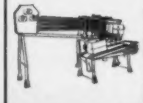
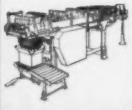
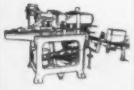
STANDARD-KNAPP EXPANDS ITS FAMOUS LINE TO INCLUDE ROCKWELL CARTONING MACHINES



FULLY AUTOMATIC CARTONING MACHINE
— formerly known as Rockwell Cartoning Machine

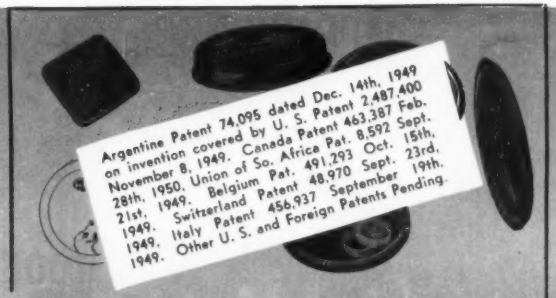
STANDARD-KNAPP has acquired the entire line of machinery and equipment formerly produced by Rockwell Packaging Machines, Inc. Designed for versatility, these machines will now be backed up by the engineering, manufacturing, sales and service facilities of the Standard-Knapp organization.

We are prepared right now to discuss the installation of cartoning machines in any plant. Inquiries are invited concerning the application of these and other machines in the Standard-Knapp line to your packaging problems.

UNLOADERS	UNSCRAMBLERS	LABELERS	CAN PACKERS	BOTTLE PACKERS	CARTON PACKERS	GLUERS & SEALERS
						

STANDARD-KNAPP Division of Hartford-Empire Company **PORTLAND, CONN.**

Tupper Seal, air and liquid tight flexible covers fit, and are included in the sets of all Tupperware Canisters.



Argentine Patent 74,095 dated Dec. 14th, 1949 on invention covered by U. S. Patent 2,487,400 November 8, 1949. Canada Patent 463,387 Feb. 28th, 1950. Union of So. Africa Pat. 8,592 Sept. 21st, 1949. Belgium Pat. 491,293 Oct. 15th, 1949. Switzerland Patent 48,970 Sept. 23rd, 1949. Italy Patent 456,937 September 19th, 1949. Other U. S. and Foreign Patents Pending.

There's a Tupper Seal, air and liquid-tight flexible cover for Tupperware 2, 5, 8 and 12½ oz. Tumblers too, and these Tupper Seal, covers fit many other containers of metal, glass and crockery.

TUPPER / Seals

air and liquid-tight, flexible covers for Tupperware Tumblers, Canisters, Wonder Bowls, Cereal Bowls and many another container of glass, metal and pottery, the contents of which it is desired to keep fresh and wholesome.

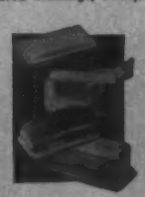
TUPPER /

The Tupperware 50 oz. Canister is "standard equipped" with the Tupper Seal, air and liquid-tight flexible Pour All cover.

The Tupper Seal, air and liquid-tight flexible Pour All cover is used on every Tupperware 20 oz. Canister.

The Tupper Seal, air and liquid-tight, Pour All cover as a cover for 46 oz. cans; Tupperware Sauce Dishes and other containers of metal, glass or pottery. Foods easily dispensed without removing entire cover.

The Tupperware Wonder Bowls are usually fitted with Tupper Seal, air and liquid-tight covers.



The cover of the Tupperware Bread Server which serves as a bread tray also is designed to give similar results as Tupper Seal, air and liquid-tight Flexible covers. Keeps contents fresh as no other such container.

The Tupper Seal, air and liquid-tight flexible Pour Top cover, specially designed as a dispensing cover for specified diameters of containers holding foods such as syrups, salad dressings, catsup.

When equipped with Tupper Seal, air and liquid-tight, flexible covers, Tupperware Cereal Bowls serve many another purpose.

The Tupper Seal, air and liquid tight flexible cover made for Tupperware 8 oz. Tumblers also fits over is sold with all Tupperware Funnels as a base when funnels are used as storage containers.

FORMAL NOTICE! 9th November, 1949

EXCLUSIVE!

U. S. Patent #2,487,400

The Tupper Corporation has attained a position of leadership in this industry by incurring great expense and expending painstaking effort in the development, design, manufacture and exploitation of its many world-known products.

The Tupper Corporation further has anticipated the inevitable attacks to which leadership is subject and has taken measures provided by law to preserve the creative rights to its products, methods and design by patent protection both in the United States and abroad.

Tupper Seals for Tupperware shown in this advertisement are just a few of the forms covered in this manner and are specifically covered by U.S. Patent #2,487,400.

Only the Tupper Corporation, by U.S.Patent #2,487,400 has the right to make, use and vend container closures in connection with any and all types of containers throughout the United States and its territories as covered by the claims of the Patent.

Tupper Corporation will protect, according to law, the exclusive rights above granted

TUPPER CORPORATION

TUPPER CORPORATION

Manufacturers of — CONSUMER, INDUSTRIAL, PACKAGING AND SCIENTIFIC PRODUCTS

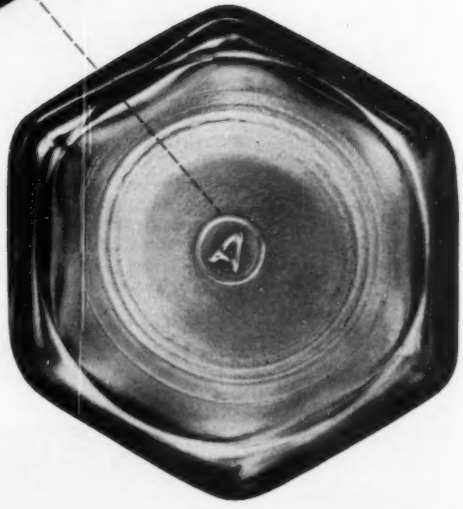
FACTORIES: Farnumsville, Mass., and Cuero, Texas New York Show Rooms 225 Fifth Ave.

ADDRESS ALL COMMUNICATIONS TO: Department A

The mark

that means

good glass



From the model-maker's craftsmanship to the finished ware, the Armstrong aim is quality glass that will be a credit to the Ⓐ mark. We'd like to show you how the meticulous care of our glass craftsmen can help produce dependable containers for you. Contact your Armstrong representative or write to Armstrong Cork Company, Glass and Closure Division, 2312 Prince Street, Lancaster, Pennsylvania.

ARMSTRONG'S GLASS

Boxes by Paper Package Co., Indianapolis 6, Ind.

MONTGOMERY WARD

SELLS TOOLS TO WOMEN

WITH Lumarith* TRANSPARENT SHEET

How to attract the woman shopper to the tool counter? . . . Montgomery Ward does it with Christmas gift packages in distinctive green with transparent lids of Lumarith sheet. Offering full visibility, the Lumarith lid keeps the tools protected against excessive handling, soiling and rusting.

Lumarith Transparent sheet produces the ideal "showcase" container for any and every product. Sales comparison figures before and after the use of Lumarith transparency convincingly demonstrate the selling power of this packaging method.

If you think transparent packages are too costly . . . if you think they are only practical for luxury merchandise, call your Celanese representative and get the other side of the story from him. He can show you how the Montgomery Ward idea of "showcase packaging of tools" leads the way to sales.

Celanese Corporation of America, Plastics Division, Dept. 8-L, 180 Madison Avenue, New York 16. In Canada, Canadian Cellulose Products, Ltd., Montreal and Toronto.

Celanese* PLASTICS

*Reg. U. S. Pat. Off.

Aere perennius in L.I.City

OR: *Art is long, but Yuletide is annual!*

It is an old Einson-Freeman custom—five or six years old, anyway—to knock out something strictly non-commercial, pressroom schedule permitting, as a jolly Yuletide token for valued clients, art lovers, and people we know in the ad business.

In past years, these Xmas keepsakes have run to full color reproductions of the works of Gordon Grant, Grant Wood, and Thomas Benton; with an occasional light touch such as the little cardboard angels of RCA.

Selection of the *objet d'art* for the 1950 holiday memento developed a slight difference of opinion that darn near tore the joint apart. Maybe we better pause for station identification.

Like Caesar's Gaul, all Einson-Freeman is largely divided among three partners, not overlooking the other stockholders who work here!

Joe Leigh is a man of the people with an acquired taste for small boat sailing and chow mein. He is in charge of sales, finances, and public speaking. He can take Art, or leave it lay for quite long periods.

Al Hailparn, Harvard '24, is fond of art, physical culture, filet sole, and good books when he doesn't have to read them right away. He is in charge of sales, finances, and not running the office. Al likes to go to the Museum of Modern Art!

Larry Engel went to Wharton, is partial to his two sons and ham on rye, drives an open car the year 'round. He is in charge of sales, finances, and trips out of town. At the moment he is somewhat allergic to Art, as he was odd man in this rhubarb.

Well, it seems that last Spring *Time* ran a piece about a "turbulent surfscape," titled "March—North Atlantic," by Frederick Judd Waugh, which had been voted the best liked (by almost a million people) of the 124 paintings in the Encyclopedia Britannica Collection shown over a five-year period in twenty-six cities, including Pittsburgh.... (Inhale!)

*Time*reader Joe Leigh figured the favorite picture of a million people (almost) would be a sure-fire

"March—North Atlantic" by Frederick J. Waugh. Lithograph 15 7-8" x 24"

"The Line Storm" by John Steuart Curry. Lithograph 15 7-8" x 24"

EF holiday souvenir. A lot of our customers, after all, don't know much about art—they just buy what they like. So he promptly secured reproduction rights from the copyright holder, Senator Bill Benton, who used to be an adman himself.

Simultaneously at the same time, Al Hailparn got a gander at "The Line Storm" by John Steuart Curry, in the Sidney Howard collection.

"It did something to me here," Al says, with a mid-cravat gesture. He could see "The Line Storm" lovingly lithographed in nine or thirteen colors, as the practically perfect holiday handout, any year. And negotiated reproduction rights right away!

A little later, Leigh remembered to tell Hailparn that he had selected a subject for the Xmas opus. Flash!...Corporate harmony got a hotfoot!

Hailparn said that "March—North Atlantic" was sullen, colorless, something only a sailor could love: that art was not appraisable by averages or popular polls: that "The Line Storm" reflected the very soul of Mid-America. And so on.

Leigh said "Yes but" and other things, in vain.

A few days later, all our art directors and artists were selling Curry, and all the EF salesmen selling Waugh, instead of sticking to business.

The crisis brought forth the man who ended it—none other than Larry Engel. He pulled his partners together, and proposed that a friend of his be commissioned to paint "Line Storm—North Atlantic," combining the best features of Waugh and Curry—for only five hundred bucks...No sale.

Engel then pointed out that the firm had grown to prosperity because they were all three of different temperaments, attitudes and opinions...just like ham and eggs and buttered toast; or Faith, Hope and Charity; or Foote, Cone & Belding! And suggested we produce both Christmas keepsakes—Waugh representing the solid, Republican, business viewpoint of the firm; and Curry the sensitive, artistic spirit of EF! Everybody agreed and went out for a drink.

If anybody ever again says that the American business man is a sordid soul lapped in filthy lucre—just kick him in the shins, with our compliments!

All of which explains why this year You Too have a choice of two EF Xmas keepsakes...faithful reproductions of fine art in full color. Mrs. Curry and the Senator say the lithographs are wonderful. We say they're wonderful...If three such testimonials aren't enough, go somewhere and *pay* for your pictures!

Send no money, stamps, or box tops—just write legibly, indicate your choice, and include your address. BUT—only one print to a customer, or non-customer. No dealers or counterfeiters...Requests filled in order of receipt. With our best wishes etc.

Do you Curry or Waugh?

EINSON-FREEMAN CO., INC.

Art-until-it-hurts lithographers

Starr & Borden Avenues, Long Island City, New York

Package These NOTIONS Components in CLEARSITE:

Buttons • Fasteners • Hooks & Eyes • Thread • Sewing Kits • Findings • Millinery Findings • Beads • Jewelers' Findings • Safety Pins.

Endow your products with these sales advantages of CLEARSITE:

- **Shatterproof**
- **Flexible or Rigid**
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- **Permanently Printed**
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- **Clear or Opaque in All Colors**

CLEARSITE definitely enhances product value; it looks expensive but really isn't.

In the Notions Field...

Point-of-Sale

Play Up Display

Your Products are Clearly, Compactly, and Conveniently Displayed in CLEARSITE and achieve a Plus-Value that Makes Your Prospects Want to BUY.

CLEARSITE Plastic Selling Containers project your products to your customers. Your products are enhanced by CLEARSITE'S clear or gemlike colors, its luxurious appearance, its sparkle and freshness, and its usefulness as a handsome, permanent storage and re-use vial. Your name remains with your customer and insures repeat sales even after the contents have been removed.

Send us samples of your products. We'll return each one in a CLEARSITE Container. Or, write for data-packed literature that details the uses and advantages of CLEARSITE *Plastic* Selling Containers.

CLEARSITE is made only by

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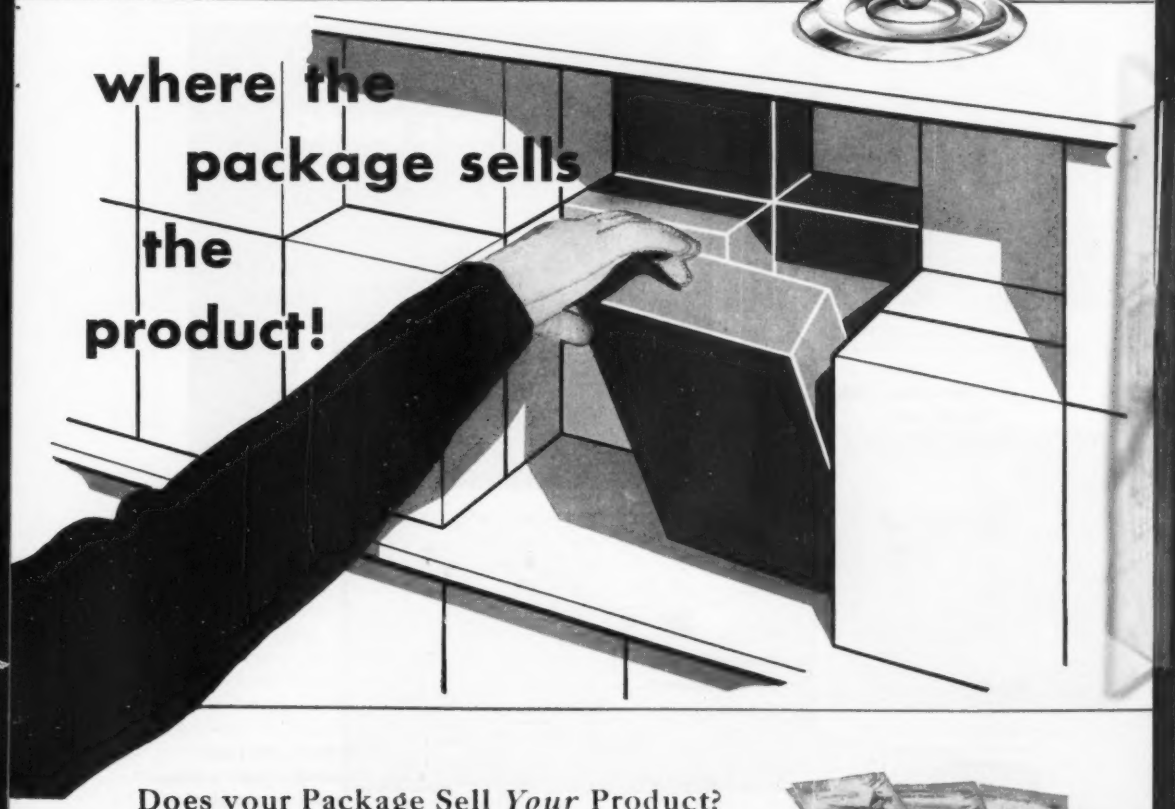
America's #1 Source for Plastic Containers • Est. 1919

Milwaukee • Los Angeles • Detroit • New Haven • Cleveland • Denver • Minneapolis • Cincinnati • Atlanta • Houston • Chicago • Jacksonville • Ft. Worth • St. Louis • San Francisco • Phoenix • Seattle • Portland • Louisville • Jackson • Richmond • Montreal • Toronto

Customer Preference...



where the package sells the product!

Does your Package Sell *Your* Product?

OLD DOMINION
Box Company, Inc.

Plants located throughout the South

Executive Offices: LYNCHBURG, VA. • *Sales Offices:* CHARLOTTE, N. C.

OLD DOMINION BOX CO.
Charlotte, North Carolina

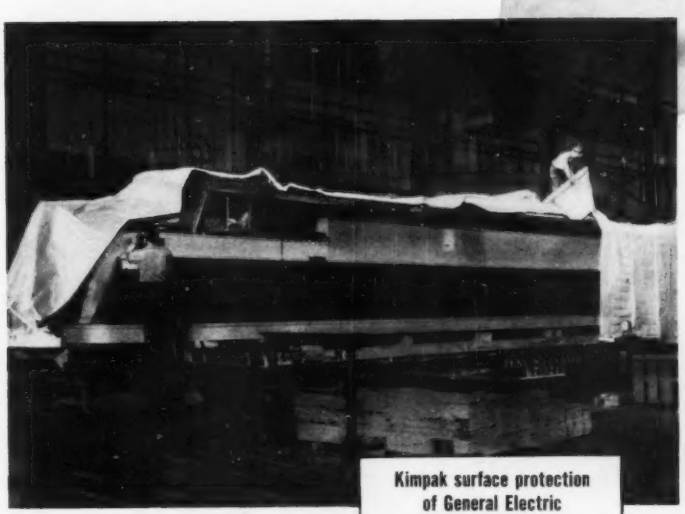
Please send me illustrated folder on the following types of packages: Set-up Boxes ☐, Folding Boxes ☐, Corrugated Containers ☐, Acetate Boxes ☐, Paper Canisters ☐.

Name_____

Company_____

Address_____

Kimpak Float Packaging*



Kimpak surface protection of General Electric Diesel locomotive

Fluorator, a product of Menlo Research Laboratories, Menlo Park, California.

From delicate instruments to giant Diesel locomotives—maximum protection at lowest true cost!

In the world's largest shipping package a 231-ton Diesel-electric locomotive is assured of the finest surface protection. It's protected for a damage-free trip overseas by soft, strong, shock-absorbent KIMPAK* creped wadding. And KIMPAK affords equal shipping protection to instruments, furniture, flowers, food and even precious liquids in delicate glass vials. For KIMPAK is designed to defend your product against all kinds of shipping hazards—from vibration, shock, pressure marking, rubbing, scratching.

KIMPAK comes in rolls or sheets—in a wide range of guaranteed thicknesses and specifications to cover all Four Basic Methods of Interior Packaging: Surface Protection, Blocking and Bracing, Flotation, and Absorbent Packaging. So easy to apply, it saves literally hours in the shipping room. So clean, soft and non-abrasive, it serves to "dress up" a package, as well as to reduce damage in transit.

Try KIMPAK soon. You'll find it not only cuts your shipping costs, but provides "float packaging"—the world's most effective shipping protection. See your nearest KIMPAK distributor listed in the classified telephone directory under "Packing Materials" or "Packing Materials—Shipping"; or write to Kimberly-Clark Corporation, Neenah, Wis.

Outboard motor, manufactured by Johnson Motors, Waukegan, Illinois.

Kimpak

REG. U.S. PAT. OFF. & FOREIGN COUNTRIES

A PRODUCT OF Kimberly Clark RESEARCH

CREPED WADDING

*T. M. REG. U. S. PAT. OFF. & CAN.

FREE BOOKLET!

KIMBERLY-CLARK CORPORATION
Neenah, Wisconsin MP-1250

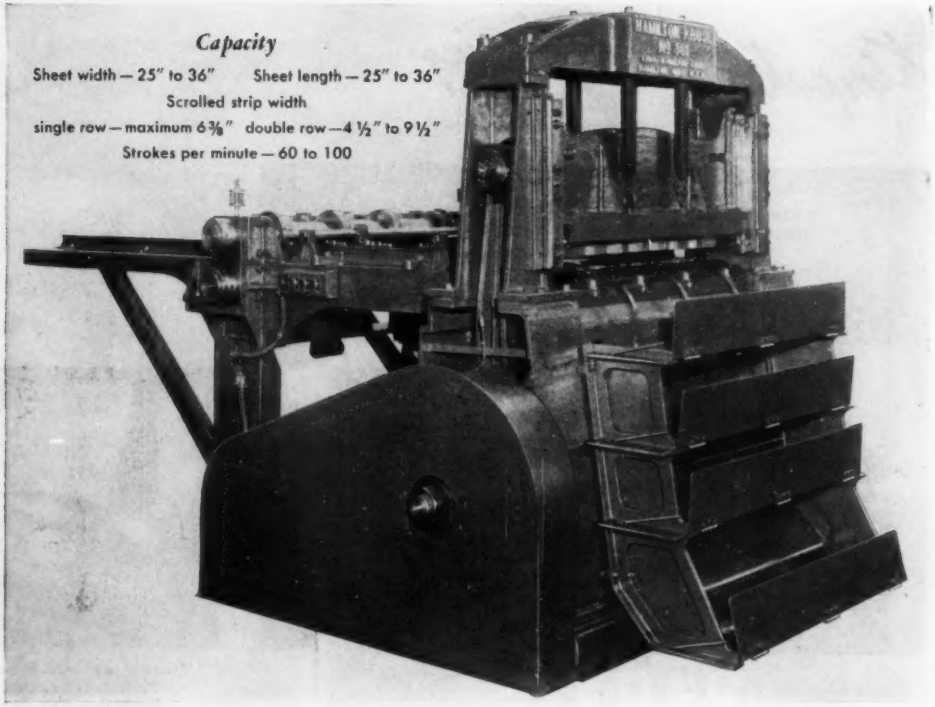
Please send me free, the illustrated KIMPAK booklet, "Float Packaging."

Name .....

Firm .....

Address .....

City, Zone, State .....



The Hamilton-Kruse Scroll Shear

...designed to save 4%–7% in tinplate

The Hamilton-Kruse Model 301 Scroll Shear has been designed to save from 4% to 7% in the tinplate required for can ends, bottle caps, screw caps, and other closures, as compared with straight-cut strips. Operating at high speed, machine has a long die slide and rigid frame, which together give true die alignment and resulting maximum die life. The operating mechanism is located below the table thereby preventing oil or grease from contaminating the table. The scroll shear can be equipped for either hand or automatic sheet feeding.

Extremely accurate spacing is one of the outstanding features of this Hamilton-Kruse model. Automatic fingers carry the sheets to the die for cutting. As the sheets are fed into the die, they are pushed back against positive stops at each stroke so that each cut is exactly positioned. After cutting, the front and back strips and the scrap drop automatically into their respective bins.

Other features include the intake table which has a squaring or gaging device and a slitter attachment that trims two sides of the sheet — and the safety devices which include a ball-loaded slip clutch and a magnetic brake on the 3-hp individual-drive motor.

* * *

For complete information and specifications write to Can Machine Department, Lima-Hamilton Corporation, 400 West Madison Street, Chicago 6, Illinois, or directly to Hamilton, Ohio.

LIMA HAMILTON CORPORATION

HOOVEN, OWENS, RENTSCHLER CO. **HAMILTON, OHIO**

A division of the Lima-Hamilton Corporation

Manufacturing FOLLOW-THRU...

A few of the nationally famous companies who use United Board & Carton services

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Armour & Co.
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Muench-Kreuzer Candle Co., Inc.
James B. Beam Distilling Co.
Industrial Tape Corp.
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that UPGRADES all your ideas about folding carton service!

Order your next supply of folding cartons from United Board & Carton and let yourself in for a pleasant surprise.

After you place the order, you can forget the rest. We do all the worrying. All the planning and execution. All the checking and re-checking. All the follow-up of countless details, even to making the paperboard in our own mills so that we can be sure the stock exactly fits your needs.

Shipments go out on *schedule* . . . from a conveniently located box factory. They arrive when you want them.

ON SCHEDULE carton building takes a lot of doing, but it's a regular part of the dependable service which has made United Board and Carton a favorite with exacting users for more than half a century. Want more details? A letter or wire will bring them.

UNITED BOARD & CARTON CORPORATION

156 SOLAR ST., SYRACUSE, N. Y.

Board Mills: LOCKPORT, THOMSON, N. Y., URBANA, O.; Carton Plants: SYRACUSE, VICTORY MILLS, CONOES, BROOKLYN, N. Y., SPRINGFIELD, O.

STAR BRAND ADHESIVES..

ONE TRIAL IS WORTH A THOUSAND WORDS!

That comfortable feeling of *knowing* your adhesives are on the job *after* production is yours the day you standardize with STAR BRAND ADHESIVES.

Ceaseless research, finest raw materials and careful compounding put into every Star Brand Adhesive the reliability that means *results*... flawless, dependable results for each of your packaging operations calling for an adhesive.

From labeling to case sealing... there's a Star Brand Adhesive formulated to deliver exactly the results you're looking for.

For exceptional conditions requiring a *special* adhesive, try our RESINOUS and LATEX BASE emulsions... and our LACQUER TYPE adhesives.

- **STAR Case Sealing Glue**
- **STAR Folding Box Glue**
- **STAR Hot & Cold Pick-Up Gums**
- **STAR Tin Paste**
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- **STAR Carton Sealing Glue**
- **STAR Bench Paste**
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... and STAR Labeling Glues in Ice-proof and Semi-ice-proof formulations.

Bingham Adhesives

"MAKE YOUR IDENTITY STICK"

BROTHERS COMPANY

SINCE 1826

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Vinylite BRAND RESINS PACK BEST!

Yes, fiber containers, packages, boxes coated with VINYLITE Brand Resins can take hot as well as cold foods—solid or liquid. Neither normal hot-food temperatures nor the coldest freezers can impair their protective qualities—recognized more and more widely by processors and consumers, alike. Witness these packages lined with glassine paper coated with VINYLITE Brand Plastics.

VINYLITE Resin coatings resist heat and cold, water, oils, greases, alkalies, and acids. They are tasteless, odorless, and non-toxic.

Package designers and manufacturers welcome their economy and efficiency for application to paper, metal, and foil. They are readily heat-sealable. They accept color printing and may themselves be in any color. They protect containers from contamination by contents and contents from contamination by containers. They resist penetration by odors, moisture, air.

If you have not investigated VINYLITE Brand Resins and Plastics, as well as BAKELITE Polyethylene, for your packaging problems, call us in. Bakelite representatives will gladly show you what these materials have to offer to reduce costs, improve performance, and increase your business. Just write Dept. JC-55.

Data courtesy Plastic Coating Corporation, Holyoke, Mass., and Sealright Co., Inc., Fulton, N. Y.

Vinylite BRAND RESINS

BAKELITE DIVISION

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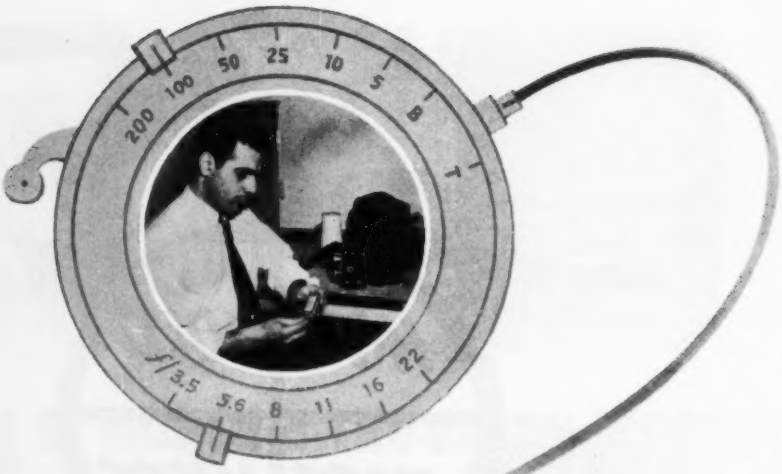
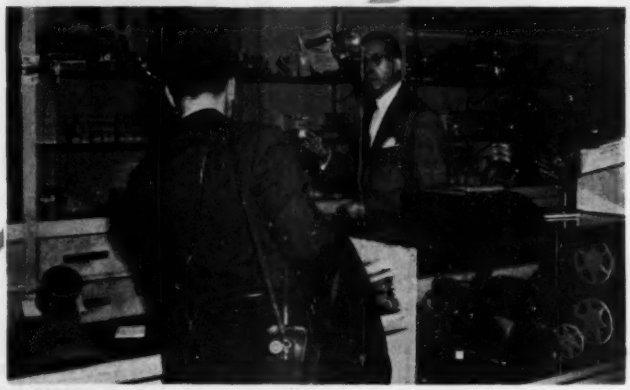
BAKELITE DIVISION, *Union Carbide and Carbon Corporation,* 30 East 42nd Street, New York 17, N. Y.



Visible Quality in the Package Can Reflect the Invisible Quality of the Product!



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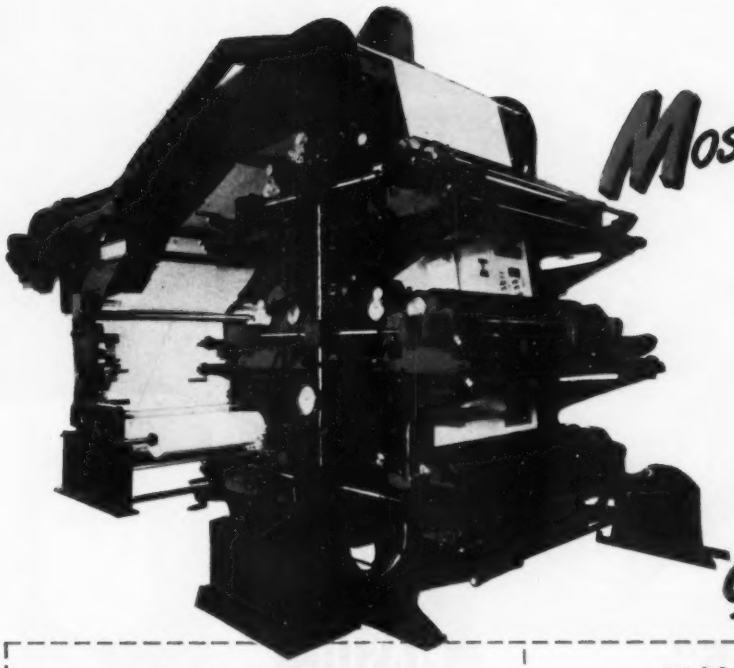
SUPERIOR PRINTING SURFACE • ASSURED UNIFORMITY • BRIGHT FAST AND SOIL RESISTANT COLOR
HIGHER VARNISH GLOSS • BRIGHTER – SMOOTHER • LUSTROUS BRUSH FINISHES AND EMBOSSINGS
CUSTOM MADE FOR EVERY ORDER • CONTROLLED COLOR MATCHING

MADE AT RIDGEFIELD, N. J. BY LOWE PAPER COMPANY



Most advanced press of its type ever developed

Only the KIDDER MASTER ANILINER Brings You All These Benefits:

- Heavier, more precision built press throughout
- Metered ink fountains — constant ink flow at all speeds
- Unique drive — fountain rollers continue running when press stops
- Greatly simplified hydraulic-cylinder release system
- Improved drying system — partially dries each color as printed, then completely dries, seals, remoistens and cools printed web after all colors have been applied
- Independently driven ink fountains — way shaft and gear box system uses only hardened gears, running in oil; not geared to plate cylinders
- Anti-friction bearings throughout — easy running, minimum power consumption, long life of moving parts

Kidder Salutes Standard Cap and Seal Corp. On Its Purchase of Kidder's 100th Aniline Press!

The remarkable growth of Standard Cap and Seal Corporation's Flex Vac Division has been one of the outstanding developments in modern packaging.

Specializing in the highest quality work to meet the exacting requirements of today's packaging and merchandising needs, Flex Vac numbers among its customers an impressive array of America's greatest brand names. Only a Kidder Press could deliver the high quality printing these customers demand.

The delivery of Kidder's 100th press to Standard Cap and Seal Corporation is an event which Kidder Press Company marks with pride . . . and congratulations!

KIDDER THREE POINT PRESS

KIDDER
Manufacturer of "3 Point" Presses — so-called because they fulfill the three major requirements for perfect printing.

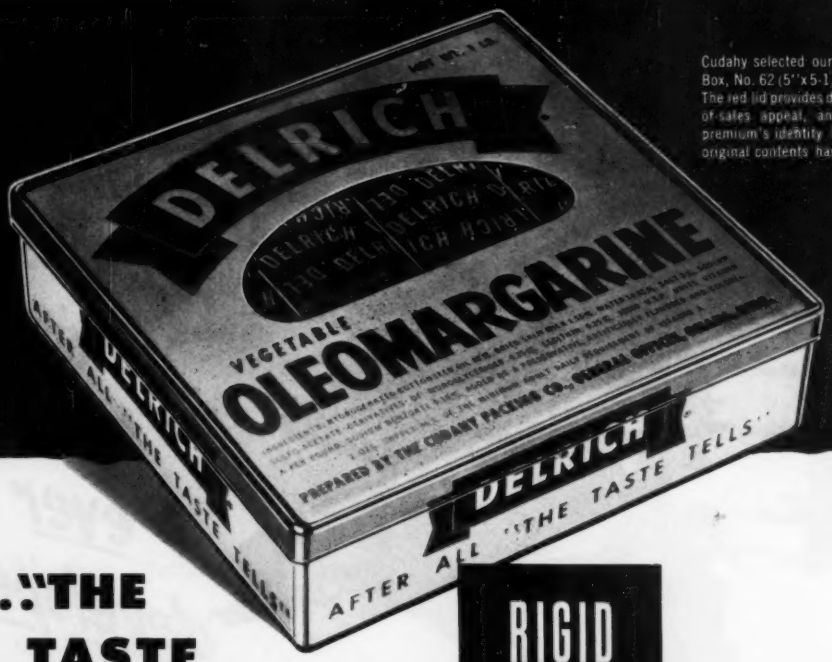
The Kidder Master Aniliner is available in 52-inch and 65-inch printing widths and in four- or six-color frames. For further information write:

KIDDER PRESS CO., INC.

DOVER, NEW HAMPSHIRE

A. E. MARCONETTI, INC.
Empire State Bldg.
New York 1, New York

MACHINERY SERVICE CO.
5270 East Washington Blvd.
Los Angeles 22, California



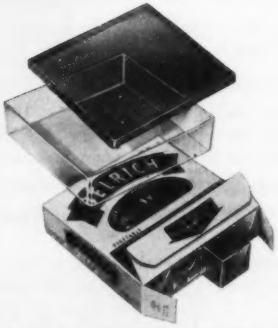
Cudahy selected our Rigid Plastic Box, No. 62 (5"x5-1/4"x1-3/8"). The red lid provides dramatic point-of-sales appeal, and retains the premium's identity long after the original contents have been used.

..."THE TASTE TELLS"

but the Tri-State RIGID PLASTIC BOX SELLS

By packaging in Plastic—in Tri-State Rigid Plastic—Cudahy Packing Co. stimulates sales of DELRICH Oleomargarine. The reuseable Tri-State Plastic Box provides compelling incentive — at the point-of-sale — to buy and try the product.

Whether you package a food or dairy product, confections, tobacco, class or mass items of any kind, there's a Tri-State Rigid Plastic Box to fit your product — build your sales — simplify packaging operations. If we cannot fill your needs from our wide variety of stock sizes and shapes, we'll mold to your specifications.



The standard DELRICH 1-lb. carton fits snugly into the bonus box which becomes an integral part of the package, with no involved additional packaging procedures.

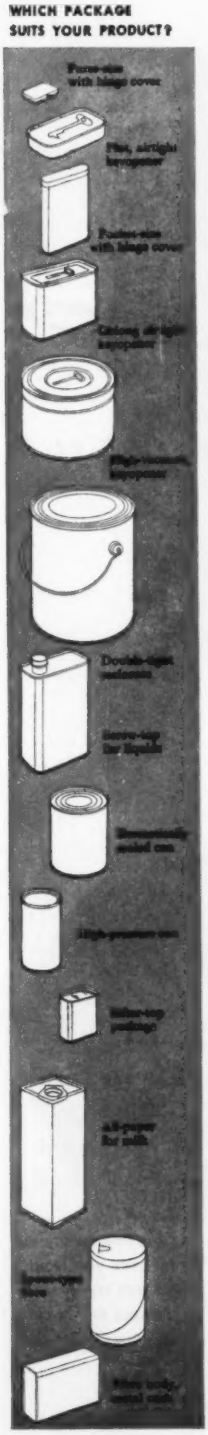
The best Rigid Plastic Boxes are Injection Molded by

TRI-STATE PLASTIC MOLDING COMPANY

HENDERSON, KENTUCKY

NEW YORK: 12 E. 41st St., Murray Hill 3-6572 **CHICAGO:** 176 W. Adams St., Franklin 2-7292

LOS ANGELES: 10583 Holman, Arizona 9-2672



"OB-ROUND" shape means more cans pack in shipping container; more squirt per squeeze—from bellows-action sides that won't stick. Three heights (same size base): 1 oz; 3 oz; 4 oz. Full space for litho-label in many colors. Two types of closing machines available—for high-speed and for semi-automatic, limited production.

NECKS are integral part of top and are lined with synthetic rubber compound which is oil and solvent-resistant for effective sealing.

SPOUTS available in moulded plastic, transparent or colored, or extruded soft metal.

If the consumer uses your product in small amounts at a time...

this packaging suggestion may interest you

TWO USEFUL PRINCIPLES are apparent in Canco's familiar lighter-fluid and household oil container.

The little nozzle dispenses a small amount at a time, and the screw top makes a tight reclosure for a volatile liquid.

In addition to lighter fluid

Immediately, it looks as if this container would be adaptable in some form to cologne, liquid deodorants, sun-tan lotions, cleaning fluids, polishes, rubbing alcohols, and oil and other liquid hair preparations.

How about this container for viosterol and other highly concentrated liquids requiring measurement by drops?

It's a thought to consider, and perhaps your package-development people and ourselves should talk things over.

Since 1901, Canco has been out front in creating new and more effective packages. There is hardly a major development in the packaging industry—whether it be for a food or non-food product, whether the problem is metal, or fibre, or a combination of both—that this keen, alert organization has not pioneered.

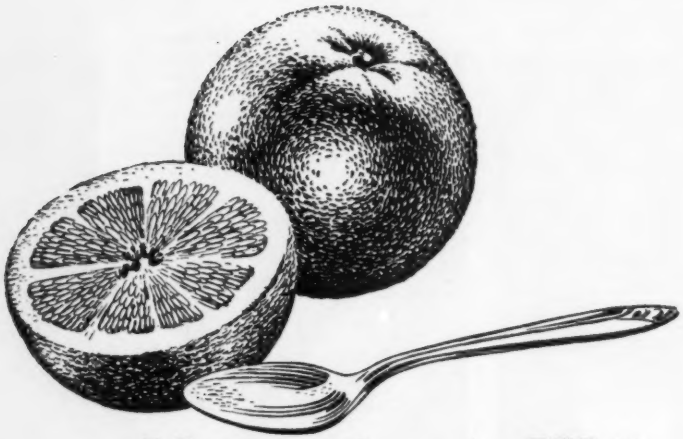
Canco can help you with eye-catching label designs, cost-cutting, sales-building advice on packages, processes, filling and closing.

Canco stands ready to serve you promptly in production-line emergencies. From Canco you get as many containers as you need when you need them. Let's get together! *Call Canco first* . . .

AMERICAN CAN CO.

CANCO

NEW YORK
CHICAGO
SAN FRANCISCO
HAMILTON, CANADA



Nature does it Well...

West Carrollton GENUINE VEGETABLE Parchment *does it Better!*

Natural flavor is protected by nature for a short time only. West Carrollton Genuine Vegetable Parchment protects foods as long as necessary. It is ODORLESS, TASTELESS, GREASE RESISTANT and INSOLUBLE. Complete facilities in our own plant for printing in one or more attractive colors (*with special inks.*)

DRY WAXED PARCHMENT
BUTTER WRAPPERS
BUTTER TUB LINERS & CIRCLES
BUTTER BOX LINERS

★

LARD CARTON LINERS
MILK & ICE CREAM CAN TOPS
SLICED BACON WRAPPERS
OLEOMARGARINE WRAPPERS

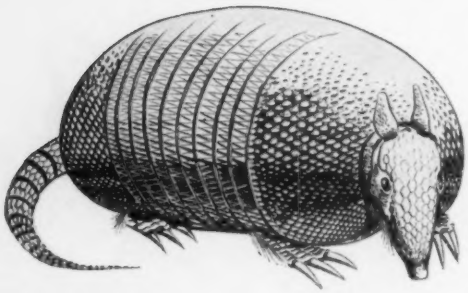
★

VEGETABLE SHORTENING CARTON LINERS
CELERY WRAPPERS
FISH FILLET WRAPPERS & INSERTS
MEAT WRAPPERS

★

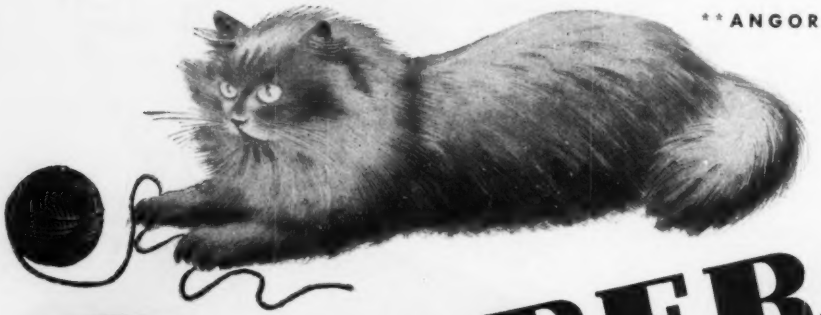
LINERS FOR MEAT TINS
POULTRY WRAPPERS
CHEESE WRAPPERS
TAMALE WRAPPERS
MANY OTHERS

WEST CARROLLTON PARCHMENT COMPANY • WEST CARROLLTON, OHIO



*ARMADILLO

PROTECTION AND Beauty



**ANGORA CAT

KVP PAPERS For The FOOD INDUSTRY

INDUSTRIES SERVED

BAKING
Bread - Cracker
Cereal

MEAT
Packing - Locker
Retail

DAIRY
Butter - Cream - Cheese
Ice Cream - Milk

FISH - FRUIT - FROZEN FOODS
POULTRY - SHORTENING
VEGETABLE

All the skill you use in selecting and blending and processing foodstuffs is fully protected to the family table when the right KVP paper is chosen for the job at hand. And where beauty and design can add to sales appeal, KVP artists and printers are past masters at using color to set cash registers ringing. Are you taking full advantage, in your present package, of these KVP features of protection and beauty? It costs nothing to write for recommendations for packaging improvements.

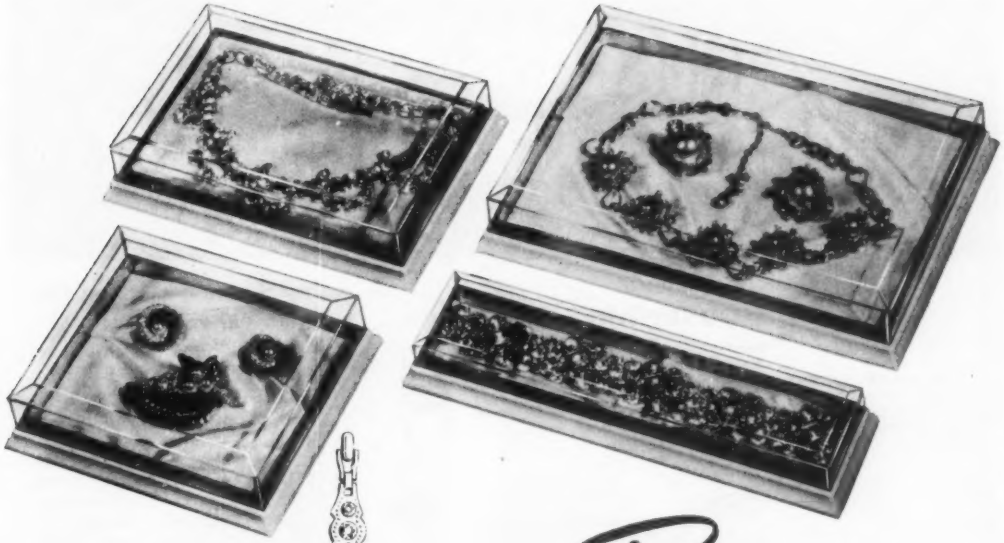
* A disagreeable-looking member of the order *Edentata*. Lives in burrows in the Southwest where his bony armor plate protects him from reptiles and other enemies.

** One of the most beautiful representatives of *felis domestica*. His splendid coat suggests the long, silky hair of the Angora goat whose tresses usually wind up in textiles.

Kalamazoo Vegetable Parchment Company

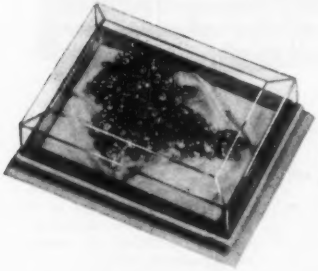
PARCHMENT · MICHIGAN

ASSOCIATED COMPANIES: KALAMAZOO VEGETABLE PARCHMENT CO., DEVON, PENNA.
KVP COMPANY OF TEXAS, HOUSTON, TEXAS
HARVEY PAPER PRODUCTS CO., STURGIS, MICHIGAN
IN CANADA: THE KVP COMPANY LIMITED, ESPANOLA, ONTARIO
APPLEFORD PAPER PRODUCTS LIMITED, HAMILTON, ONTARIO · MONTREAL, QUEBEC



YOUR BEST LOOKS *Better*

when packaged in Koppers Polystyrene



A complete series of jewelry display boxes—five different sizes—is molded from Koppers Polystyrene 31. Manufacturer: C. & M Manufacturing Co., Providence, R. I. Molder: C & M Plastic Co., Providence.

● Merchandisers say that a well-displayed item is half sold. No wonder retailers are so enthusiastic about display boxes like this series for jewelry made by C & M Manufacturing Company, Providence, R. I.

Covers of the boxes are molded from crystal-clear Koppers Polystyrene 31, combining maximum visibility with necessary protection for the product. The tray is ivory Koppers Polystyrene 31, which forms a background that dramatizes almost any piece of jewelry.

For all its attractiveness, Koppers Polystyrene is a low-cost packaging material. Its original cost is low and its light weight yields more pieces per pound than similar materials.

No matter what type of packages you design and manufacture, it will pay you to investigate fully the economy and moldability of Koppers Polystyrene.

KOPPERS

Koppers *Perfected* Plastics

Koppers Polystyrene has made Many Products Better and Many Better Products Possible.

KOPPERS COMPANY, INC., Chemical Division, PITTSBURGH 19, PA.

SALES OFFICES: NEW YORK · BOSTON · PHILADELPHIA · CHICAGO · DETROIT · LOS ANGELES

INCREASE SALES PACKAGE PROMOTIONALLY!

FEDERAL *Practical* **HOUSEWARES**

436—SUGAR SERVER
Can be packed with jellies, jams, condiments, etc., and re-used for sugar server. 13 oz. capacity.

810—COCKTAIL SHAKER
Can be packed with hard candies and re-used for proper mixing of all drinks. 32 oz. capacity.

435—NO DRIP SERVER
A new type, inexpensive server, for honey. Plastic top. 13 oz.

137—NO DRIP SERVETTE
Plastic top. Use for honey, syrup, cream salad dressing, etc. Easy to keep clean. 11 oz. capacity.

453—TWIN-SERVER SET
For jellies, jams, marmalade, horse radish, mustard, catsup, chili sauce. Colorful, inexpensive and ideal for kitchen and breakfast nook. 6 oz. capacity each.

Here's just a sample of the many packaging products FEDERAL HOUSEWARES offer you for your particular product

REPLACEMENT OR A REFUND OF MONEY ★ Guaranteed by Good Housekeeping IF NOT AS ADVERTISED THEREIN

430—1½ Qt. NO DRIP SERVER
Use as a fruit or vegetable juice server (holds economy size (46 oz.) can of juice. Stores easily in refrigerator for ready use). Ideal for batters, cocktail shaker, milk, hot chocolate, ice water (slide holds back ice cubes). 48 oz. capacity.

465—OIL & VINEGAR SET
Ideal for oil and vinegar as well as honey, syrup, cream, catsup, salad dressing, condiments, etc. 7 oz. capacity each.

427—NO DRIP SERVER
Dispenser for syrup, honey, cream, salad dressing, sugar, etc. 13 oz. capacity. Plastic top. Metal slide. Also available in 7-11-32-48 oz. capacity.

467—"3-WAY" SALT & PEPPER SET
Can be packed with jellies and re-used for salt and pepper shakers. 7 oz. capacity each.

631—SUGAR METER
Has the same uses as the sugar server but has added feature of releasing ½ teaspoon at a time. Capacity 13 oz.

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Good old down-to-earth hard selling is what FEDERAL HOUSEWARES do for you when you package your product in these re-usable containers.

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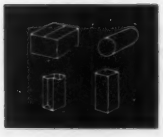

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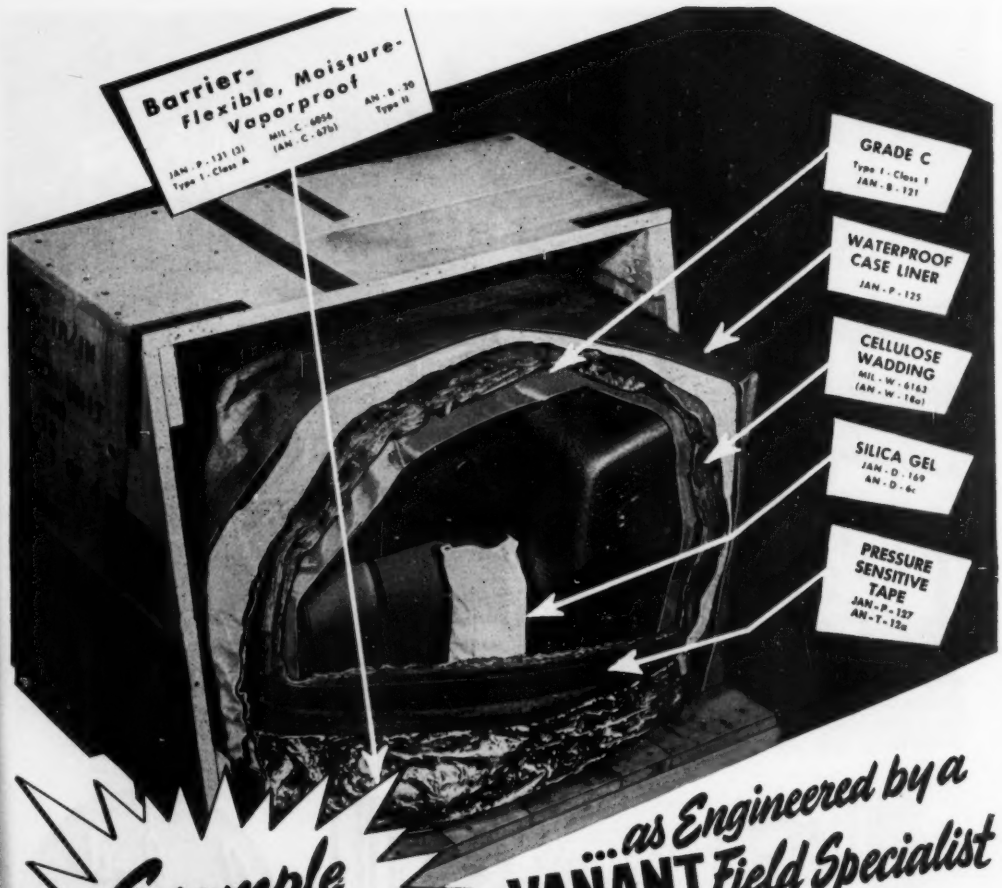

Example OF A PRESERVED PACKAGE*

...as Engineered by a VANANT Field Specialist

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*Illustrating packaging design for Generator Plant manufactured by D. W. Onan & Sons, Inc., Minneapolis, Minn.

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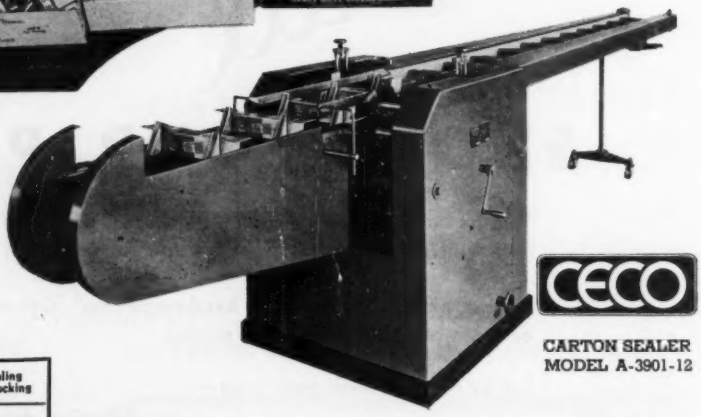

CECO

CARTON SEALER
MODEL A-3901-12

CECO *Models*

Model	Carton Feeding and Opening	Product Insertion	Sealing or Tucking
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40	Automatic	Manual	Automatic
3901	Manual	Manual	Automatic

ALL CECO models can be arranged to glue-seal both ends, seal one end and tuck in the other, or tuck in both ends. Range of adjustability can be varied as required.

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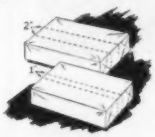
How to stretch your Cellophane supply

(and cut your packaging costs)

A review of your packaging operation may well show you ways to conserve packaging materials. Here are some economy points to check if you are using Cellophane:



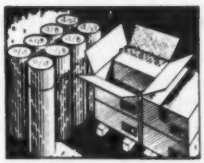
MACHINE CUTOFF can often be a source of waste. The illustration shows an unnecessary two-inch overlap. By reducing this to a one-inch overlap on a 9" x 6" x 1" package, 263 more packages can be wrapped with a 33-pound roll of Cellophane.

STUB ROLLS are sometimes carelessly discarded—for instance, after a production break. Often many more packages might have been made from a discarded roll.

ROLL WIDTHS require continual checking. If you've made even a minor change in your product or package, it will pay to check your Cellophane roll-width. Adding an end label to a bread package, for example, may allow reducing the roll width from 16" to 15"—a saving of one roll for every sixteen used.

PACKAGE SHAPES can sometimes be modified to save on materials. For instance, the change to a narrow, deeper tray, shown here, trims the wrapper size up to 25% . . . makes a sturdier package, too.

PACKAGING MACHINE EFFICIENCY helps save Cellophane. Is the machine cleaned regularly? Are sealing plates at proper temperature? Is tucker-arm adjustment correct? Are side plates necessary to keep Cellophane from "side-slipping"? Is the film acclimatized to the wrapping room before being run?



GOOD STORAGE CONDITIONS eliminate many machine breaks and consequent waste. Cellophane should be kept in original containers, in a clean, dry place that's not extremely hot or cold. And cylindrical containers should be stored on end—sheets not over 12 bundles high—shipping cartons in low piles to avoid pressure at bottom.

* * *

These are but a few general suggestions that present users may want to consider. In the final analysis, each individual user is the best judge of how economies can be effected in his own operation. Your Du Pont representative is familiar with these and other economies, and will be glad to study your own particular packaging operation—and assist you in every way possible to stretch your Cellophane supply.

DuPont Cellophane

Shows what it Protects—
Protects what it Shows

DU PONT

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BETTER THINGS FOR BETTER LIVING . . . *THROUGH CHEMISTRY*

Modern packaging

Vol. 24 No. 4 December 1950

More mileage from materials

IT'S THE ONE WAY TO COMBAT THE TWIN PROBLEMS OF SHORT SUPPLIES AND SOARING COSTS—AND HERE ARE SOME TIPS ON HOW TO DO IT

What can be done to make the supply of packaging materials s-t-r-e-t-c-h a little farther?

With package users thrown suddenly, within a few weeks, from a comfortable balance of supply and demand into a position where almost no packaging material can be obtained in the quantities desired, that is the No. 1 question of the day.

Some form of allocation is being enforced by suppliers not only of cellophane, acetate and polyethylene, but also of such once-plentiful materials as paperboard, cans, glass and aluminum foil. Whether the sudden apparent shortages have been caused by sound economic factors, by the drain of military requirements, or merely by a scare psychology of buying and selling is an interesting question—but one that is purely academic to the package production man. The shortages are very real to him and the question here is not what caused the shortages, but what to do about it.

We know of no case where a product has been forced off the market for lack of packaging. With few exceptions sufficient materials are available to maintain a level of shipments about equal to the 1949 norm. The trouble is that demand for almost every type of packaged product—again stimulated by fears of shortages—has soared far beyond this level.

There is little hope for immediate relief, even in cases where material shortages so far are obviously not justified. Mere scare buying would soon exhaust itself. But with a $40 billion military program now actually getting under way—cutting to some degree into supplies of all basic materials, while at the same time pouring extra billions into the pockets of wage earners to sustain an inflated demand for packaged goods—it will be some time before we again see a balance of supply and demand.

If this reasoning is accepted, it is apparent that there is only one source of relief for the package production department: *conservation*. Getting more mileage out of available materials. And this approach to the problem becomes doubly imperative in the face of soaring costs of every type of packaging material.

This is no new situation for packaging people. For 10 years, more or less, they have been fighting the battle of shortage, substitution and high costs —with only momentary relief now and then. During this time they have discovered some ingenious ways of making a little go a little farther. The purpose of this article is to re-examine the basic principles, as well as the little tricks of conservation, for the valuable lessons that they may hold now.

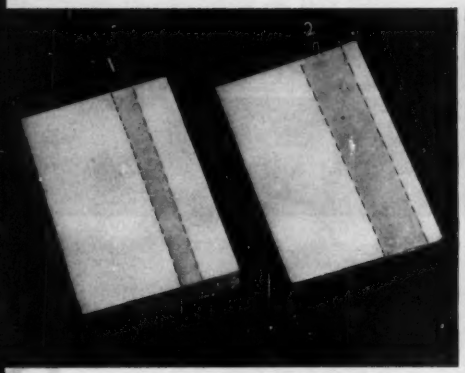
One leading company in the soap field which learned its lesson about shortages during the last war has never relaxed its effort in effecting economies. It reports that as the result just of "keeping its house in order" it has shown savings in paper packaging materials since 1945 aggregating nearly a million dollars.

Among cellophane users there are many outstanding examples of conservation to obtain greater film mileage. A typical baking company, just by trimming useless fractions from dimensions of each wrap, has been able to get 141,000 extra wraps per month—at no extra cost. The manufacturers of cellophane are currently making available to users much helpful information on the handling of cellophane.

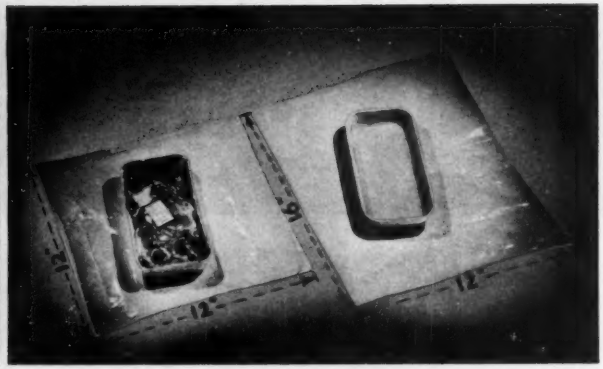
Such examples and information, we believe, should be reviewed by everyone engaged in packaging activity for suggestions applicable in many directions.

Eliminating waste

Obviously the starting point in any program to save materials is the elimination of waste. Charles A. Lewis, National Production Administration, United States Department of Commerce, pointed this out in his address at the recent Packaging Institute Forum, saying that the best way to forestall Government controls is for industry to take steps on a voluntary basis, following the pattern of experi-



REDUCING OVERLAP by proper machine cut-off is one of the first places for economies in flexible packaging materials. Here the overlap, reduced from 2 to 1 in., meant a savings of more than 6% in poundage of cellophane.



SMALLER SHEET SIZE may often be used efficiently, saving as much as 25% in material usage. Here a 12-by-12-in. sheet of cellophane is now doing the job of wrapping an 8-by-5-by-1-in. pre-packaged meat tray in place of a 12-by-16-in. sheet formerly used. Use of the smaller sheet results in obtaining 34 additional wraps per pound of cellophane.

ence gained during the last war, to effect savings in containers and basic raw materials. Conditions can be helped right now by beginning to cut out the frills and non-functional uses that are all right in normal times, but not in a tight supply situation such as today, he said.

The proposals are—and they are not new, but similar to those made at the beginning of the last war:

1. *Do not over package.* Design containers, particularly fibreboard shipping containers, to use a minimum of material. Keep packing adequate, but be sure it is not more than adequate.

2. *Use the largest container practicable.* The glass-bottle maker can make 2-oz. bottles about as fast as 1-oz. bottles; quarts as fast as pints. The box maker can manufacture boxes to carry a far greater tonnage out of the amount of fibreboard available, for instance, by packing 48's instead of 24's, or 23's in place of 12's.

3. *Get maximum re-use from your container.* Through special "spot," "strip" or tape sealing, fibreboard containers can be closed sufficiently well to carry, yet be opened without damaging so that the containers may be collapsed, returned and re-used.

4. *Proper salvage.* Waste kraft is needed badly. Kraft going overseas cannot be reclaimed. It is imperative that users should collect their brown-paper containers of all types when they have reached the end of their useful life, sort this material properly and keep it segregated so that it can be sold as waste kraft paper.

5. *Do not order more containers than your immediate, minimum requirements.* To do this adversely effects the entire container program. So does a delivery date far ahead of the time of intended actual use. Trade associations can aid in equitable redistribution where excessive stock piles exist.

Maximum efficiency in any packaging program, of course, can be achieved only by proper organization and functioning of the packaging department.

During the past few years, largely as the result of packaging problems encountered during the last war, a great many large companies have given this phase of their operations the most serious attention. They have sought to obtain personnel thoroughly experienced in purchasing, engineering and production to head up these departments. They have established complete systems for writing packaging specifications. Such procedures are of inestimable value in eliminating waste of materials. When all requirements of a package are written down before production begins, there is much less chance of having completed packages that have to be run over because, say, a carton blank is off register, or because the colors do not match the designer's dummy.

Standard test procedures have also effected savings. This is particularly true in the case of shipping containers where tests sometimes prove that the redesign of a carton or the use of a lighter-weight board will do the job at a tremendous saving of paperboard. One firm saved $200,000 by a simple redesign of the flaps on a shipping case when proper attention was given to the problem by experienced personnel.

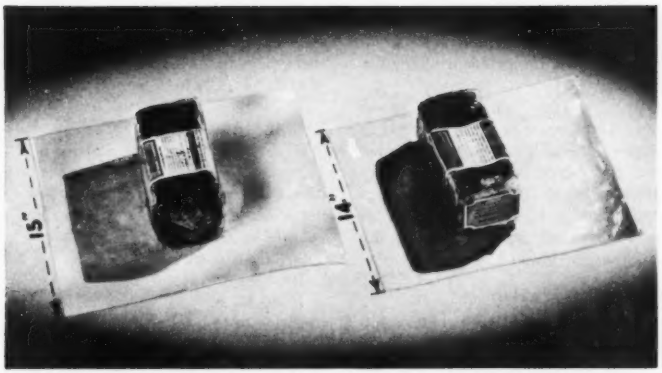
Vigilant checking to see that wrapping and cartoning machines are in proper adjustment will avoid "spoils" and may effect a surprising saving in waste materials which in normal times are discarded without a thought.

Offhand, it seems inconceivable that such procedures have not been adopted generally throughout industry—especially in view of all the information that has been made available through technical associations and the technical press. Yet leaders in the field say it is surprising the waste that goes on—not only in small companies, but in large ones too—because there is a lack of instruction information and coordination between the work of designers, purchasing departments, outside suppliers and package production departments.

To get your house in order, then, is the first requisite for making materials go farther. Even the smallest firm can do this, if it delegates the right person to head up all packaging activities and to determine in advance of production the exact requirements.

Carton planning

The head of the packaging department for the firm which made the



END LABELS sometimes permit reducing the web width of the roll. Without an end label, this baker must use a 15-in. roll to obtain a proper end seal. With an end label he is able to use a 14-in. roll. The saving is one roll of wrapping material for every one of the 15-in. rolls formerly used. The inner band label provides brand and product identity.

million-dollar saving in paper packaging materials divides instruction procedure for carton packaging into five work steps, which will be helpful to those organizing similar activity:

1. *Finished artist's drawing*, ready for plate making. This must be complete in every detail with copy, design and colors approved by all departments.

2. *Purchasing specifications* drawn up on standard forms covering all essential detail such as size of sheets, type of paperboard, quantity, prices, etc. Any essential information omitted may cause useless waste.

3. *Mechanical drawing* to provide accurate measurements and construction detail, drawn up to the tolerances the purchaser will accept.

4. *Standard instructions for test procedure*. These instructions designate the methods to be used for the tests and indicate the performance expected for the finished package.

5. *Color specifications* for the printing. If color uniformity is maintained, there is no scrapping of runs because colors do not match color samples accurately.

With such complete instructions, the purchasing department can order paperboard and printing with confidence. The artist's drawing indicates exactly what is wanted: the mechanical drawing shows how the carton is to be constructed; the standard tests assure the use of the proper type and weight of board so that there will be no later trouble with packages that fail because they do not meet specified performance requirements. Color specifications, if lived up to by the printer, save inestimable waste of material and time. Firms which have organized their packaging departments in a similar manner can all point to outstanding savings in the use of paperboard.

Flexible packaging

It is fortunate that some of the greatest opportunities for savings exist in the field of flexible materials—which are currently most critical and most likely to remain so for a long time. Missionary work by manufacturers and converters of all types of films and paper is well under way and the outstanding progress that has already been made in the saving of cellophane—presently perhaps the most critical of all basic packaging materials—points the way to many effective economies that can be made in the use of practically all types of flexible packaging materials.

Roll widths and machine cutoff are the first places where such savings can be achieved. Therefore the conservation measures that are being taken by the users of cellophane in many instances can readily be adopted to other types of roll stock such as Pliofilm, acetate and polyethylene as well as to glassine, waxed papers, aluminum foil combinations, etc. Rolls of flexible materials, of course, in most cases may be ordered in practically any width, while the machine cutoff can be very easily controlled within the user's own plant.

Du Pont reports that one New Jersey bakery firm is saving more than 1,700 lbs. of cellophane monthly by simple reductions in dimensions. Like many other bakeries, this firm had been using extensive roll widths and cutoff of film.

By carefully checking roll widths, cutoffs and overlaps—but keeping in mind a certain fluctuation in size of product from day to day—this company was able to make the following analysis:

1. Average additional wraps per pound of cellophane on all items possible by reduction in area of wrappers—5¹/₄.

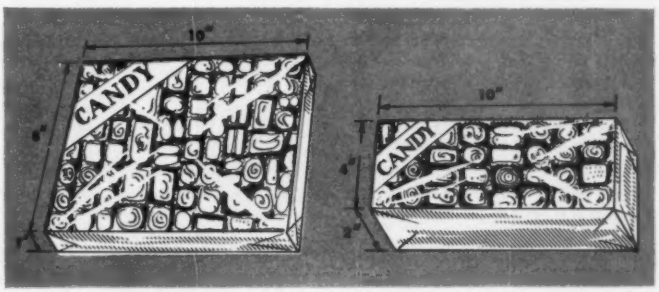
2. Pounds purchased monthly (one plant only)—27,000 lbs.

3. Total additional wraps—141,000.

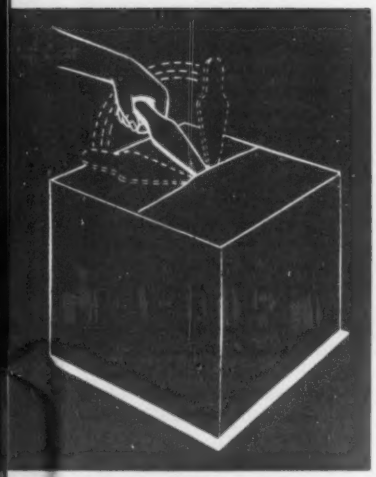
4. Approximate total pounds saved monthly—1,700 lbs. or more than 6%.

5. Approximate dollar savings monthly—$867.

On rye bread alone, this company



MODIFIED SHAPE of package can occasionally result in a considerable saving of wrapping materials. Candy changed from a 8-by-10-by-1-in. tray to one measuring 4-by-10-by-2 in. permits trimming wrapper size 26%.



RE-USE of shipping containers depends on closing and reopening without damage. Seals may be broken without tearing by sliding a wooden paddle back and forth, not up and down, underneath the flaps of the box.

made a substantial saving as shown in the following table:

Roll width	*Before cutoff*	*Overlap*
13 1/2	19 1/2	3
Roll width	*After cutoff*	*Overlap*
13	18	1 1/2

A Cleveland baker discovered a similar saving on the sheet size used for his whole-wheat loaf. The sheet size was 15 1/2 by 19 1/2 in. or 297 sq. in. at a cost of $8.22 per thousand loaves. It was found that a sheet size could be used at 15 1/2 by 17 1/2 in., or 266 sq. in., which cost $6.46 per thousand loaves and extends usage of film approximately 10.4%. In this case, the whole saving was in the overlap which had been 3 1/2 in. and could just as well be reduced to 1 1/2 in.

Overlaps on the packages used by a Brooklyn baker ran from 1 3/4 to 2 3/4 in. A standard overlap of 1 1/2 in. was recommended, with resultant savings of about 6% of the quantity of cellophane used.

Minimum overlaps, of course, cannot always be adhered to in bakery packaging due to non-uniformity, shape of loaf, absence of inner band labels or in case of printed film, but the need for abnormal overlaps can sometimes be traced to inadequate maintenance of wrapping equipment, even as far as the problem of regular cleaning.

Every plant's maintenance group must therefore be actively engaged in proper care of equipment and must have the cooperation of machine operators on all shifts to maintain clean equipment and to adhere, if at all possible, to adjustments set by the maintenance group.

Watch that overlap!

For guidance in the proper minimum overlap to be used, various machinery manufacturers offer the following recommendations, which are applicable to flexible materials, other than cellophane, which the machines will handle:

A.M.F.	1 1/2 to 2 in.
Battle Creek	3/4 to 1 in.
Hayssen	1 to 1 1/2 in.
Lynch	About 1 in.
Oliver	1 1/2 to 2 in.
Package Machinery	1 to 1 1/2 in.

Sheet sizes

Savings are also possible in the use of sheet stock by careful analysis of the wrap sizes used, whether cellophane, paper or plastic films. A New York food chain has found that it can save cellophane in packaging self-service meat items. Formerly, four sheet sizes had been used:

11 1/2 by 11 1/2 in.
12 by 16 in.
18 by 18 in.
20 by 20 in.

Study showed that for the many different items packaged, the following sheet sizes could most advantageously be used:

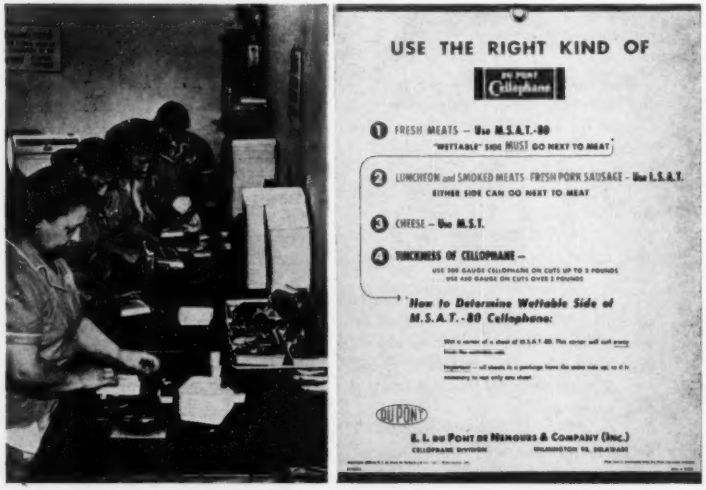
9 3/4 by 9 3/4 in.
10 1/2 by 10 1/2 in.
12 by 12 in.
13 by 14 in.
16 by 16 in.
18 by 18 in.
20 by 20 in.

The in-between sizes eliminated the use of large sheets of cellophane which had formerly been used to package comparatively small items. Also, some store cutting of sheets was in evidence and such a process had been slow and wasteful.

The greatest waste was found in the use of a 12 by 16 in. sheet for the products listed in Table I.

Storage care

Proper handling of packaging materials is one of the first essentials in every conservation program and many of the basic recommendations



POSTER REMINDERS hung in wrapping departments can help cut waste. The one illustrated is for pre-packaged meat departments to assure proper film usage. Similar conservation posters are now being prepared.

TABLE I—CELLOPHANE SAVINGS POSSIBLE BY USE OF SMALLER SHEET SIZES

Product	*Border tray size*	*Present sheet size*	*Suggested sheet size*	*Percentage saving*	*Additional wraps per pound of cellophane*
Loin lamb chops Rib lamb chops Lamb stew, pork Chops, veal Beef steak Fresh boneless Butts Flank Skirt steak Pigs feet and knuckles Broilers, fryers Parts and fricassee Roasts, 2–5 lbs.	8 by 5 by 1 in.	12 by 16 in. 192 sq. in.	12 by 12 in. 144 sq. in.	25	34
Beef shoulder Veal leg and loin pork	None	18 by 18 in. 325 sq. in.	16 by 16 in. 256 sq. in.	21	16

for cellophane—with the exception of temperature and humidity conditions—apply to all types of film as well as to paper.

1. *The type of film should fit the use.* Among the hundreds of different types of flexible materials, each designed for specific purposes, it is necessary to select the one that will do the job right. Breakage or damaged packages with attendant waste can often be traced to use of an improper type wrapping material.

2. *Inventory control should be established* for using oldest stock first to eliminate stock more than 90 days old. Some types of cellophane, for instance, are adjusted to give better performance during the warm, humid weather of summer. This summer-adjusted film should not be used in the winter when conditions may be cold and dry. Paper can also be affected by excessive humidity.

3. *Proper storage conditions* are essential to maintain each type of film—moistureproof and non-moistureproof—at proper temperatures and relative humidity.

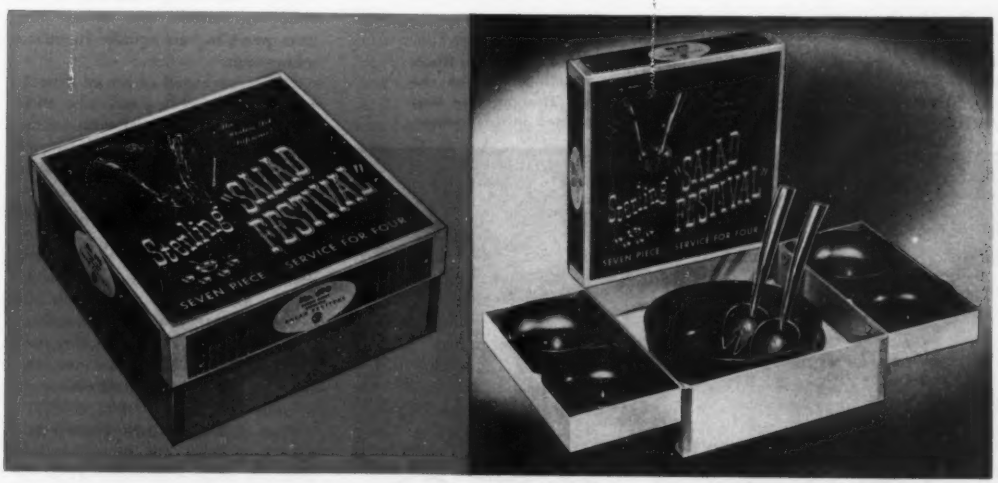
Users are cautioned to keep all types of films in original containers and to stand cylinders on end. If the roll stock is shipped in cartons then it is wise to stack the cartons in low piles to avoid pressure at the bottom.

When rolls are removed from the containers for handling in the plant, however, it is well to avoid standing them on end, particularly if they are unwrapped. Nicked edges can cause breaks on the machines. In the case of cellophane, the careful user will remove the rolls from the machines at the end of the day and rewrap them in the original wrapper.

Sheet stock should not be piled more than 12 bundles high. The film should be stored in a clean place, avoiding extremes of temperature and humidity.

4. *Proper relative humidity* in storage and manufacturing areas is essential to avoid waste. Efficiency of cellophane and some other materials can be affected by either extreme dryness which tends to make the film too brittle, or by conditions of high humidity which can cause beading and banding of cellophane roll stock, or sticking and blocking of sheets and rolls. High humidity and too high moisture in the product to be packaged can cause (a) less seal strength in the film, (b) impairment of moistureproofness and printing, (c) increased softness and stretch.

In winter months natural humidity indoors is apt to be low and artificial humidification of film may be necessary. The simplest method is the "wet bag in a barrel," by which is meant keeping the cellophane in a



CLEVER CONSTRUCTION provides an excellent display idea, saves shipping space and conserves paperboard. Sterling "Salad Festival" plastic bowls require platform protection; long, shallow box would have consumed more board and is bulky to ship. The solution is square box with slotted inner trays that can be removed and fitted to box sides for display.

drum lined with a damp cloth. Humidification is a tricky problem and it is well to ask the supplier for instructions on how to obtain the best results.

Where moisture of product is a factor, the user should check regularly the performance of cellophane bags with heat-sealed seams and ends, the strength of straight-out, heat-seal closures, exposure to humidity of unwrapped sheets and rolls of cellophane.

5. *Outer packaging materials.* Corrugated cartons, inner cartons, pads, separators, boats, U-boards, labels, etc., should also maintain high moisture content during winter to prevent them from taking moisture away from cellophane-packaged products. Storage at 60 to 75% relative humidity is desirable.

This condition is much easier to obtain at temperatures around 45 to 55 deg. F. than at work-room temperatures of 70 to 80 deg. F.

6. *Shipping containers should hold packages snugly* for protection. High bursting-strength containerboard will give the stiffness and cushioning needed.

The pads and separators prevent packages from shifting. Inner cartons should be used when needed to protect fragile products and to help absorb shocks. The shipping container should hold a moderate number of packages; too large a container is a hazard.

7. *Proper heat sealing and adhesives* prevent the weakening of film. Heat-sealing temperatures should be high enough for a good seal, avoiding smoking or steaming and "tattletale brown" traces.

The jaw sealers should be rounded so that they won't pinch the material. All heat-seal surfaces, of course, should be kept clean and in adjustment to eliminate damage to the film. Proper adhesives are available; the wrong type may cause failure.

8. *Allowance should be made for shrinkage.* When used to wrap rigid containers, cellophane should not be put on so tightly that it bursts as it shrinks to the fit.

9. *Durability may be improved* in the case of cellophane packages containing moist products if a day or two of storage is permitted before shipping—a desirable procedure in cold weather.

10. *Dry contents may lower the moisture content* and the strength of the cellophane. It is thus wise in dry, cold weather to ship the product as soon as possible after it has been packaged.

11. *Cold-weather shipping* should be made under conditions of heated transportation if possible. It is even advisable to delay shipment when the temperature goes very low if heated transportation is not possible. Shipments received in cold weather should be allowed to warm up to room temperature before unpacking.

12. *Quick turnover is advisable.* Film performance generally is best when the turnover of the packaged goods is fast. It is therefore desirable to move the longest-packaged products from the factory first, particularly when storage conditions are not so favorable. This applies right down to the retail level in moving oldest packages off the shelves first.

13. *Machine check-ups* should be made regularly to see that all parts are clean, that sealing plates are at proper temperature, that the tucker-arm adjustment is correct. Side plates should be installed if necessary to keep the film rolls from side slipping.

Here are a few additional hints about flexible materials which may prove to be helpful:

Stub rolls of film or paper are sometimes discarded when production breaks occur and replaced with new rolls. Oftentimes these stub rolls can be used to wrap many more packages.

Use of end seals on bread wraps may occasionally permit reducing the web width of the rolls. In some cases the roll width may be cut as much as 1 in. On a 15-in. roll, this will save one roll of film for every 15 used. A material-saving measure like this should not be carried to such extremes, however, that machine efficiency is impaired.

Package shapes may sometimes be modified to save large quantities of material. A wide, shallow package may be redesigned to a narrower, deeper one, using considerably less wrapping material and at the same time providing an equally functional selling unit.

Candy packaged in a tray 8 by 10 by 1 in. changed to a tray 4 by 10 by 2 in. will reduce the quantity of material for the wrapper 26%. It will also cut the amount of board required for the tray. Sometimes the new package meets merchandising requirements better than the old.

Bag sizes should be analyzed. Sometimes dimensions too large for the product are used. A quarter inch in width or length can save quantities of material on large production runs. Care should be taken, however, that the bag size is not reduced sufficiently to cause breakage.

Posters dealing with conservation have been hung in wrapping-machine areas by some manufacturers as reminders of shortages and of the greater mileage that may be obtained

(*This article continued on page 186*)

TIERED CASES for 48 twelve-ounce flat-top cans of Carling's Black Label beer are said to cut packaging costs substantially and at the same time provide quicker handling by the retailer. The cans are first packed six to a handy carrying carton and then inserted into container.

COMPLETE VISIBILITY is provided for frozen oysters and cod fillets in cans with printed-acetate bodies, conventional crimped-on metal ends.

Transparent can

FROZEN OYSTERS AND FISH IN ACETATE-BODIED CANS HAVE A FRESH, FROSTY LOOK THAT WINS CONSUMER ATTENTION

Transparent-walled cans have been used for various dry products such as candy and nuts, and recently frozen cooked lobster has been put up in metal cans with transparent tops.* However, use of a printed acetate-bodied can for such raw frozen products as oysters and fish by Airfresh, Inc., Seattle, is a distinct innovation.

The chief merit of the new container is the merchandising appeal it affords for seafood because of complete visibility. People like to see what they are buying and since seafood is a highly perishable commodity, visibility of the Airfresh product is apparently an important sales stimullant.

Products packaged by Airfresh in the transparent container are oysters, crabs and several kinds of fish, including fillet of sole, cod and rockfish.

The sheet material used for the container is unpolished 0.015 extruded acetate. Seaming is done with a solvent adhesive that not only holds the can edges together but, dissolving into the acetate, virtually forms a weld. Can ends are the same as conventional all-metal food cans; the package is opened with a can opener.

The container label, to preserve visibility, is confined to a small sphere. The label design, using yellow, red and blue, is bonded into the plastic. A special solvent ink enables printing to be done by letterpress at a speed of 1,500 units an hour, it is said.

Airfresh does its own can assembly. Acetate is purchased in large sheets on a pound basis and turned over to a local organization that prints the labels and cuts the sheet to dimension. At Airfresh, cut sheets are formed into can bodies and sealed, and the bottom end is crimped onto the body.

Daily output of assembled cans average 100 cases (each holding 12 cans of 301 size) per employee. The output of four men is required to keep a fifth operator fully occupied at a lid-crimping machine. Containers assembled on days when the fish supply is low are stored in fibreboard cartons bearing Airfresh labels.

Fish packing is done on an assembly-line basis. One man doubles at unpacking 5-lb. cans of crab meat, prepared in advance at the point of production, and sealing top lids. Three other men arrange, pack and weigh the contents.

Adoption of the container was an outgrowth of experiments at the University of Washington School of Fisheries. A suitable container for whole crabs to be air-freighted from Alaska was being sought. At this time, one of the manufacturers of cellulose acetate announced a sturdy transparent-bodied can which it had developed experimentally to promote the use of acetate in packaging.† The possibilities of the transparent container seemed so impressive to several students working on projects at the School of Fisheries that they organized the Airfresh company to pack and market frozen fish in the new container and a successful, growing business resulted.

The first products distributed by the company appeared on the market in January, 1950. A portion of the firm's output was flown to Hawaii, where the company now reports a standing order for all items available.

Because of color and shape, crabs lend themselves more spectacularly to transparent containers. Leg pieces are placed in an upright position and the center is filled with body meat. The novelty arrangement requires slightly longer packing time, but makes for an appealing point-of-sale factor.

Production to date averages 60% oysters, 10% crabs and the balance in assorted fish. Price-wise, fillet of sole is a strong leader. Due to higher unit costs compared with tinplate cans (the transparent cans, including lids and printing, are said to average 6.2 cents per unit), the products have been introduced in specialty food marts, where in the absence of any special promotion, they are reported to have won immediate public acceptance.

According to the supplier of the acetate-sheet stock, no trouble has been experienced with water-vapor loss or from the effect of light under the conditions of marketing the Airfresh frozen products. Since the contents are frozen immediately after packing and kept frozen, there is no question of liquid leakage at the point where the metal ends are crimped to the acetate body. Test packs held in storage for four months are reported to have held up well.

CREDITS: *Acetate-sheet stock, Eastman Kodak Co., Rochester, N. Y., using Tenite 1 material from Tennessee Eastman Corp. Kingsport, Tenn. Printing, Coast Carton Co., Seattle. Can lids, American Can Co., New York. Printing inks, Ralph Leber Co., Seattle.*

* See "No Privacy for Cooked Lobsters," MODERN PACKAGING, June, 1950, p. 102.

† See "Transparent Cans with Metal Ends," MODERN PACKAGING, Jan., 1949, p. 142.

Safety

SLIDE-OFF WRAPPER makes razor-blade insertion safe and quick. Sleeve-type wrapper has die-cut opening at one end; the user simply hooks blade on razor and pulls off wrap.

NEW PACKAGES strengthen family resemblance and stress two new selling features: magnetized blade edges and new safety wrap that protects fingers. Old package (left) used gun silhouette to identify razor blades with Marlin's reputation as a maker of fine guns.

Few products demand greater respect in handling by the consumer than the double-edge razor blade. In an effort to offset the hazard of cut fingers, risked in unwrapping and inserting new blades, numerous improvements have been made in razors and various blade dispensers made of metal or plastic have appeared on the market.

The latest and simplest development is the new "Safti-Quik" wrap just being introduced by the Marlin Firearms Co., New Haven, Conn. Each Safti-Quik wrap is, in effect, its own individual razor-blade dispenser.

The waxed paper wrap has a die-cut end opening exposing one slot in the blade, so that the user can hook the blade on the razor and slide the wrap off without touching the blade with his fingers. The light-weight red-on-blue wrapper is roll fed to the wrapping machine and the end openings are cut in the wrappers, prior to the wrapping operation, by a shearing wheel which has been especially installed for this purpose in the wrapping machine.

Tests conducted by a private testing laboratory indicate, according to Marlin, that the die-cut opening causes no loss in corrosion protection. The open end of the wrapper does not expose the cutting edges of the blade. The body of the blade is lacquered and the blade is coated with an anti-corrosive oil. Only a small portion of the lacquered body of the blade is exposed by the die-cut opening.

The Safti-Quik method of inserting the blade is as easy as it is quick. As a unique packaging convenience it would alone merit attention. It is, however, only one of several new packaging features, including complete redesign of all packages for double-edge razor blades in the Marlin line.

With a view to "dressing up" the packages for smarter sales appearance, Marlin began work on its redesign program early this year and at that time an independent designer was commissioned to work out a family of designs that would adequately present the important new selling features being developed for Marlin double-edge blades.

The old packages had a dark blue all-over background and featured a rifle silhouette that helped identify the product with the company's 80-

blade sleeve

MARLIN LEAVES ONE DIE-CUT END OPEN FOR HOOKING ON RAZOR, MAKING EACH PAPER WRAPPER ITS OWN DISPENSER

year-old reputation as a maker of firearms. These packages, except for slight modifications, had been used since 1935.

They were, therefore, so well established as an "identity badge" for the product that any significant changes posed a problem of lost recognition. Though radical changes were to be made, it was decided that similarity between the new design and the old packages would have to be maintained.

The rifle silhouette, used since 1935, had to be discarded, not because it wasn't effective, but because compelling new sales features had to be given space preference on the limited area of package surface.

For example, Marlin has just recently begun promoting a process for magnetizing each blade. The magnetizing is said to reduce minute grooves, or striations, in the edges of the blades so that the edges are smoother and, therefore, are sharper.

Accordingly, in packaging the blades, the word "magnetized" is printed in red on a blue panel, where it appears over the reverse-white plate for the Marlin logotype. Lettering of the logotype has been changed to a modern sans-serif face. The former logotype was printed slantwise on the package and was uneconomical in use of space.

The words "Safti-Quik wrap" are also printed in red and are featured in a white panel. Marlin blades sell in the low-price range. Accordingly, quantity and price appear prominently on every package.

Blue background panels on the new Marlin package are lighter in shade than the all-over blue formerly used, but similarity with the former package is sufficient to help retain recognition. The lighter shade of blue is thought to have a greater attention-getting value. The panels are framed by white edges on the package to force the panels to stand alone. This is important, because the package has to stand up against lots of color and compete for attention against many other articles with which it shares counter and display space.

Since Marlin blades sell at a price which makes the cost margin for packaging quite limited, good color and effective design are considered highly important to get the utmost in sales effectiveness without running into excessive packaging costs.

In developing the new Safti-Quik wrap, no change in paper was involved. However, the wrapping machine required considerable adaptation to convert over to the die-cutting operation. An anti-corrosive coating of lighter consistency is now applied to the blade. The new coating remains softer when congealed so that the wrap will not stick to the blades.

For the new wrap, printed paper

CONVENIENT DISPLAY PACKER holds 12 of the new Marlin packages, each wrapped in protective heat-sealed cellophane. Easy-to-handle tray and sleeve pack holds 12 "Safti-Quik" wrapped blades. The tray has a compartment to hold used blades. Tear-off edge on the tray makes the new blades more accessible for the user.

INDIVIDUAL CARDS provide more prominent display and easier merchandising for the small tuck-type cartons, widely sold at novelty-store notion counters. Cards have a die-cut finger that slips into the carton.

on rolls is fed to the wrapping machine and one end of each wrap is die cut. Meanwhile, individual blades, after inspection, are automatically fed into the machine and, after wrapping, are magnetized while still in the wrapping machine. The magnetizing is reversed for each blade by continuous rotary action so that positive edges are alternately adjacent to negative edges. Otherwise, the magnetism would be dissipated as the result of repelling action of edges with identical magnetic poles. Blades are packaged in one of two carton styles—a tuck type and a sleeve type.

The thin, rectangular, tuck-type cartons for the 10-cent-sized packages are automatically machine cartoned and are inserted on individual merchandise cards, or are mounted on silent-salesman counter display cards that hold 20 packages. Both the individual and the 20-unit cards have die-cut finger slots that slip into the cartons to hold the packages in place.

The sleeve-type cartons consist of the carton sleeve and a tray that holds the blades and has a compartment for used blades. The front top edge of the tray is scored with a red dotted tear-off line so that the blades can more easily be removed from the tray. The cartons are assembled and packed by hand and a small one-fold leaflet illustrating the Safti-Quik feature is inserted in each carton. Cartons are then wrapped in cellophane and heat sealed.

The outer cellophane wrap holds the tray and sleeve intact and keeps the blades from spilling out. It also provides added protection against moisture and gives the package smarter appearance to attract the shopper's attention.

Three different put-ups are merchandised in sleeve cartons. These offer 12 blades for 25 cents, 27 blades for 50 cents and 60 blades for $1.

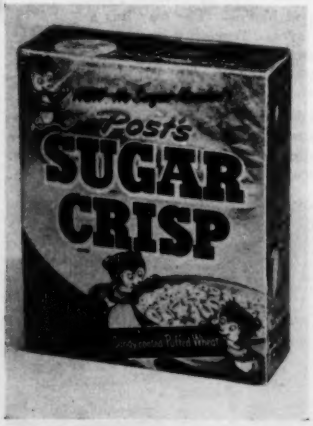
Promotion for the new Marlin magnetized blades and the Safti-Quik wraps has been launched with announcement ads in trade and consumer publications. Spot programs to dramatize the new safety-wrap feature are just getting under way on selected television stations. Dealers have been provided with counter cards and leaflets which are designed to tell the customer the story of the magnetized blades and the new individual dispensing wrap.

CREDITS: *Package design, Robert L. Gruen, New York. Cartons, The Warner Bros. Co., Bridgeport, Conn. Blade wrapper paper, Nashua Gummed & Coated Paper Co., Nashua, N. H. Cellophane, E. I. du Pont de Nemours & Co., Inc., Wilmington, Del., and Sylvania Div., American Viscose Corp., New York. Cartoning machines, R. A. Jones & Co., Inc., Cincinnati, Ohio. Wrapping machines, Excell Automatic Products, Inc., Newark, N. J.*

Foil protection for a cereal carton

The Post Cereals Division of General Foods Corp. isn't talking about its new package for Post's Sugar Crisp, which has made its appearance in test-market areas. But the trade is quite excited about the new package, which appears to represent a completely new approach to cereal packaging from both the protective and decorative standpoints.

FOIL UNDERLIES gravure-printed transparent waxed sulfite overwrap and gives striking appearance as well as protection.



The cereal—candy-coated puffed wheat which needs no added sugar—was introduced about two years ago and has been one of the biggest sales successes of recent years. According to trade estimates, it has recently ranked fifth in national sales of ready-to-eat cereals.

Originally, the product was packaged in printed cellophane bags—a novel but somewhat impractical package for a cereal because of crushing and breakage.

The new package starts with the conventional type of chipboard cereal carton, with the cereal contained in an unattached waxed glassine inner liner that has a fold-over top for protection of the unused contents. The box top is scored for easy breaking and opening.

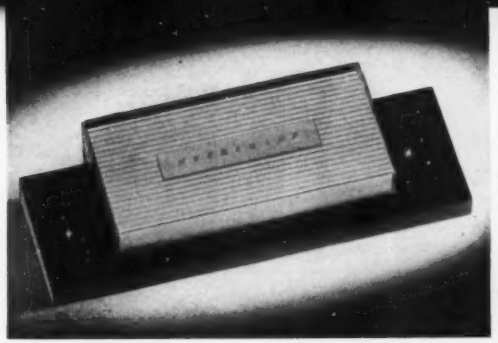
The sealed carton is overwrapped with a heat-sealing aluminum foil, tissue-backed material—which is believed to be the first use of this kind of protection in cereal packaging. Over the shiny aluminum-foil surface goes a separate outer wrap of a special semi-transparent waxed sulfite, colorfully gravure printed. The sulfite material is adhered to the aluminum foil only at the top and bottom folds and along one side panel of the carton, by heat sealing.

Striking appearance is achieved by the design, which permits the silvery aluminum foil to show through in the background areas and gives a third-dimensional quality to the dark blue, white-outlined trade name, reflecting from the aluminum foil behind it. It is a package which, on examination and handling, gives a definite protection impression.

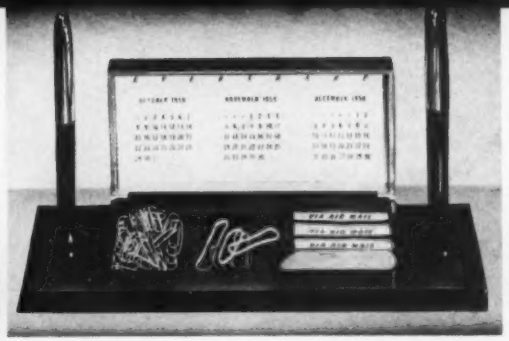
During the transition period, one side panel of the carton carries a picture of the former cellophane-bag package and copy explaining that the product is the same as the contents of the bag. The other side panel features the Post's silverware premium offer, while the top panel tells how to use the wrap of the Sugar Crisp package instead of the box top.

In the opinion of trade observers, an important new technique in cereal packaging has been established, even should the aluminum shortage temporarily restrict its use.

CREDITS: *Aluminum foil material (Reyseal), Reynolds Metals Co., Louisville, Ky. Glassine and transparent waxed sulfite, Riegel Paper Corp., New York.*



CLOSED BOX shows sockets in black polystyrene base to make desk set with pocket pen and pencil. Box cover is transparent polystyrene, fluted and with name molded in.



OPEN CASE set up for desk use reveals a calendar inside the lid, roomy space for paper clips, stamps, rubber bands, eraser, etc., when the velvet display pad is removed.

Desk-stand package

EVERSHARP'S NEW PLASTIC PEN AND PENCIL CASE POINTS THE WAY FOR LUXURY PRESENTATIONS WITH A PURPOSE

After every Christmas—and practically all other gift-giving occassions—closets and dresser drawers in millions of homes become repositories for beautiful gift boxes with little reuse value—"too pretty to throw away."

This has become increasingly true of the handsome cases for jewelry, cigarette lighters and pen and pencil sets, designed primarily for good counter display to entice the shopper.

And although the container has cost the consumer nothing extra, he often has the feeling that, without it, he should have more for his money.

Eversharp, after considering these factors for some time, has come up with a brilliant solution to this problem which may provide a suggestion to other gift packagers.

Eversharp's new Desk-Pac is a combination fountain-pen-and-pencil desk and pocket set for which the black-and-gold gift container itself converts into a plastic desk stand.

The "Desk-Pac" retails for $12.75, the price of the gold-point pen and pencil set alone. Included in the price, the plastic package offers a compelling display for the dealer.

The two-piece hinged plastic box, molded of polystyrene, is made with sockets at each end of the black base in which the pen and pencil may be placed when not in use, serving exactly the purpose of desk bases which heretofore have been provided only at considerable extra cost. The clear transparent polystyrene lid, enhanced by a gold-sprayed interior, opens to reveal a paperboard calendar.

Serving a dual purpose, the pen and pencil may be removed from the desk stand, capped and carried in the pocket when desired.

For store display, the inside of the box contains an apricot-colored velvet pad equipped with elastic bands to hold the pen and pencil in place. The dealer may show them this way, or remove one or the other to show how these writing aids fit in the sockets in the box for desk use. The recipient of the set may remove the velvet pad and use the roomy center well of the base as a convenient receptacle for paper clips, stamps, etc.

The new package is the result of design ideas submitted by the supplier in collaboration with Martin Glaberson, design chief at Eversharp.

The box is made in two parts, each produced in a two-cavity mold. The socket wells for the pen and pencil are molded right in the base. The clear polystyrene lid is fluted inside with the Eversharp trade name molded into the piece. A luxurious effect is obtained by spraying the interior of the lid with gold lacquer. The lid and base are attached by steel pins.

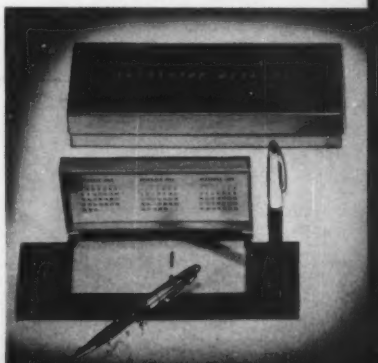
One production problem was that of putting the calendar cards inside the lid without buckling. By placing projections in the lid 0.002 in. thick and die-cutting a piece of its top, the card was fitted smoothly.

Apricot velvet was chosen for the pad covering because of its good color contrast with the writing instruments. A resin glue tacks the velvet pad to the well.

A paperboard box, with cover paper printed in gold with red lettering, completes the package ensemble.

CREDITS: *Plastic case, Arrow Mfg. Co., Inc., West New York, N. J., using Dow polystyrene. Calendar cards, Copley Press, Inc., New York. Set-up box, Belmont Box Co., Brooklyn, N. Y.*

APRICOT VELVET pad gives color contrast for display and is equipped with elastic bands to hold writing instruments in place. Dealer can show re-use by inserting pen in socket. Set-up box is covered with gold-colored paper printed in bright red.



Packaging's Hall of Fame

JELL-O

TWENTY-FOURTH OF A SERIES

Since 1941, total packaged-dessert sales in America have almost doubled. Today, more people than ever before are packaged-dessert conscious. And, according to General Foods, Jell-O—one of the company's top three sales makers—outsells all other brands of packaged desserts combined.

This is the record after more than 50 years of Jell-O merchandising. The success story is no accident. It shows once again how a quality product, a catchy trade name and a convenient, protective package can win and hold undisputed leadership among dozens of competitors when backed by effective advertising and promotion.

Jell-O is nominated for *Packaging's Hall of Fame* not merely because it pioneered the whole field of packaged desserts, but because of the tremendous influence this famous red-letter package and its product have had on the trend to hundreds of quick-and-easy-to-prepare food products that have changed the cooking and eating habits of the nation.

Jell-O's seamless, waxed-paper bag in a carton has become the basic pattern for high-speed, economical packaging of practically every similar product on the market.

And Jell-O's technique of using full-color-illustrated, mouth-watering recipe books, instituted in 1905—creating a seemingly insatiable demand for packaged desserts—was perhaps one of the greatest factors in fostering the wide growth of home-economics test kitchens in industry. General Foods reports that the demand for Jell-O recipes has jumped tenfold in the last decade and that a large share of the time of 75 young women in the GF Consumer Service Division is taken up with the preparation of hundreds of new uses for Jell-O products. Since the first recipe books were distributed in 1905, the company estimates that more than a quarter of a billion have been requested by housewives, a quantity probably without precedent in food advertising.

Like others of our *Hall of Fame* nominees, Jell-O has a brand name so firmly rooted in the public mind that it has become practically a synonym for "gelatin dessert." That is eloquent testimony to its long record of good packaging and promotion. It has been a pioneer of modern techniques in radio advertising.

JELL-O GIRL, one of best-known trademark children, made her debut in 1904—in real life, Elizabeth King, daughter of an artist in company's advertising agency. She is now married, living in England. Drawing of Jell-O Girl has appeared on packages till latest redesign this year.

The first patent for a gelatin dessert was granted in 1845 to none other than Peter Cooper, inventor of the "Tom Thumb" locomotive and founder of New York's famed Cooper Union. The patent described the dessert as a "transparent, concentrated substance containing all the ingredients fitting it for table use in a portable (*sic*) form, and requiring only the addition of hot water to dissolve it, so that it may be poured into molds and when cold will be fit for use."

Cooper, however, busy with many other projects such as helping to lay the Atlantic cable, had little time to develop his dessert formula. Neither did anybody else until 1895, when Pearl B. Wait, a manufacturer of cough medicine in Le Roy, N. Y., casting around for a product with which he could enter the rapidly growing packaged-food business, came up with an adaptation of Cooper's gelatin dessert. His wife, May Davis Wait, is credited with coining the name, "Jell-O," inspired by the success of a neighbor, Orator F. Woodward, whose Genesee Pure Food Co. was producing a coffee substitute made from grain and called "Grain-O." Grain-O has long since disappeared into limbo. Jell-O has lived to become one of the most famous of American brand names.

Wait attempted to market his new product in 1897 by house-to-house canvassing, but lacking experience and capital his approach proved unsuccessful. Two years later, discouraged, he approached Woodward with an offer to sell his business, including the name and trademark, to the Genesee Pure Food Co. The bill of sale was for $450.

Woodward had little more success with Jell-O than Wait in the begin-

NOMINATED FOR PACKAGING'S HALL OF FAME BECAUSE:

- It pioneered packaged desserts and for 50 years has outsold all competitors combined.
- Its highly mechanized, highly protective, economical packaging set the pattern for others.
- Keystone of the General Foods empire, it is still one of GF's three biggest sales makers.
- Promotionally, it made recipes powerful package sales aids and pioneered the "big show" in radio.

ning. One day he and A. S. Nico, his general superintendent, were touring the plant. They reached a section of the storage room where they saw cases on cases of unsold Jell-O piled high.

"Nico," said Woodward, "will you give me $35 for that Jell-O—the whole business?" Nico refused.

Woodward lived to see the day when he was glad that Nico had not taken his offer. Faced with the problem of Jell-O, he finally spent several thousands of dollars improving the formula. He sent out salesmen to sample it throughout the New York State countryside. Suddenly, about the turn of the century, it began to catch on. In 1902 sales jumped to $250,000. Four years later they hit the million-dollar mark. Grain-O was discontinued so that all efforts could be concentrated on Jell-O.

The first advertising campaign was launched in 1902. Women dressed in

1950 PACKAGE, just currently being introduced, has lost none of the identity of the original. The famous red letters are there, bigger for better display. The design is less cluttered by putting ingredient data on top panel. Flavors are distinguished by colors of base bands.

AUTOMATIC PACKAGING and the protective, seamless bag-in-carton package used for Jell-O were featured for many years in the company's famous recipe booklets, which were illustrated in full color. The spread shown below appeared in 1924.

ORIGINAL PACKAGE remained virtually unchanged in appearance for 35 years except for modifications to show ownership of General Foods after 1925, putting slogan on top panel, etc. First noticeable redesign, showing the trend to modern lettering, appeared about 1937.

RECIPE takes the place of the Jell-O Girl on the top panel, as shown by this photograph of a 1949 package. Some time during the '40s she was placed on bottom of carton.

white aprons and wearing triumphant smiles proclaimed from the Jell-O ads that this was "America's most famous dessert," since it could be "served with the simple addition of whipped cream or thin custard . . . If, however, you desire something very fancy," said the ads, "there are hundreds of delightful combinations that can be quickly prepared."

The Jell-O girl

The little "Jell-O girl," who remained on the packages until the latest design revision just currently being introduced (see cover illustration), made her debut in 1904 and became probably one of the best known "trademark" children in the world, along with the Uneeda Biscuit boy and the Morton Salt girl.

In real life she is Elizabeth King, now married and living with her family in England. She was the daughter of Franklin King, an artist who worked for the company's advertising agency at the time. When the idea of using child appeal in the ads was suggested, the problem was to find a child who would typify all children. King began casting around for a model, but found none suitable. Then one day he suddenly took notice of his own daughter as she romped around the studio. He tried to sketch her, but he could not catch what he wanted on canvas or paper. The idea of photographing the flaxen-haired child occurred to him; perhaps the camera could catch what he had missed with pencil and brush. It worked. For years Betty King's photograph appeared in magazine advertisements and store windows. In 1908 the Jell-O girl was drawn by Rose O'Neill, creator of the Kewpie dolls, and made part of the package design, where she remained until this year.

About the same time the Jell-O girl appeared, the first Jell-O recipe books began rolling off the presses. As many as 15,000,000 of these have been distributed to housewives in one year. No expense was spared in their preparation to tempt the homemaker with illustrations of desserts, beautiful to look at and delightful to eat. Many of the books, as well as the magazine advertisements, were illustrated by such famous artists of that era as Maxfield Parrish, Coles Phillips and Norman Rockwell of *Saturday Evening Post* cover fame. Books with child appeal were written by F. L. Baum, author of the "Wizard of Oz" books.

Jell-O was well on its way to big-time success when the Jell-O Co., in 1925, accepted an invitation to merge with the Postum Co., Inc., of Battle Creek. According to reports current at the time, Jell-O had returned a net profit of more than $3,000,000 for the single year of 1924 on sales of 2,200,000 cases.

Jell-O was the first company acquired by Postum in the rapid process by which it grew into today's huge General Foods Corp. The deal set the pattern for subsequent acquisitions of such famous brands as Maxwell House Coffee, Calumet Baking Powder, Walter Baker Chocolate, Log Cabin Syrup and a dozen others. Because it was a stock-transfer deal, rather than an outright purchase, it is impossible to determine the exact value of Jell-O at the time. But, according to *Fortune*, in exchange for the total net assets of the Jell-O Co., Postum gave 570,000 shares of its own stock, which was quoted on the Stock Exchange at $77 a share on the day of the transfer, Dec. 31, 1925—a theoretical value of $43,800,000. Thus had Woodward's original $450 investment in Jell-O grown in 26 years. Woodward's heirs are still among the largest stockholders in General Foods.

Early packages

In size and shape, the early Jell-O packages were not much different

FIRST ADVERTISING was launched in 1902. The ad below appeared in *Cosmopolitan* in 1911. Many still remember early Jell-O color illustrations.

from today's. But all of these first packages had to be made and filled by hand methods that seem ludicrous by today's standards. The inner bags were formed and glued over wooden blocks by crews of girls, then hung up on U-shaped wire forms to dry. They were filled with a measuring scoop dipped into a receptacle and leveled off with a stick, much the same as a housewife levels off a cup of flour with a knife. Cartons were set up and glued by hand and the filled bags were inserted by hand.

The material for the bags at that time was glassine—not pliable like present glassine, but a very brittle material which cracked seriously unless it was kept moist. To prevent the cracking, a cistern was installed in the plant and left open to increase the humidity and thus keep the glassine from drying out. The bags were closed simply by folding over a couple of times.

The moisture pick-up of the packaged product was terrific and caused excessive caking of the product. This packaging defect, common enough in those days, seemed to have no affect on the growing popularity of Jell-O. And as sales zoomed, the problem of obtaining sufficient labor for the packaging became increasingly more difficult. The company advertised in the local press for women from all the surrounding towns and farms to work on the Jell-O packaging lines. Old timers can remember when the New York Central used to put additional coaches on certain trains from Batavia, 10 miles away, and make a special stop at the Jell-O plant, a half mile from the Le Roy station, to deliver the Jell-O workers to their jobs.

Expanding business made some kind of automatic packaging imperative. It also demanded a package with sufficient moisture protection to give the necessary shelf life for national distribution.

For several years the company struggled with its package production, until finally the seamless, sealed, waxed-paper bag was patented June 23, 1914, by Mr. Nico, the general superintendent, and Otis E. Glidden. Assigned to the Genesee Pure Food Co., this patent made possible the advent of automatic packaging and one of the important advances in the technique of protecting all such hygroscopic food preparations from moisture pick-up and caking. Equipment to handle the bag, known as the Anderson machine, was designed by the Fred Goat Co. It made possible a method of production of inexpensive, protective packages at high speed which in principle has been adopted quite generally in the gelatin-dessert field.

So assiduously has General Foods pushed mechanization of Jell-O production and packaging that as recently as 1934, according to a *Fortune* article that year, it required an actual working force of only 150 people "to supply the world market with all the Jell-O they can consume."

The seamless, waxed-paper bag is produced by drawing a single sheet of waxed paper through a fluting and forming die. The bag so formed and automatically filled in the same operation is sealed by a pressure crimp (and today also with heat), before it is automatically inserted along with a recipe book into the carton. The heavy unbroken wax coating on the paper provides an excellent moisture barrier for the product.

By 1924, company recipe booklets, illustrating the equipment in color, proclaimed that 42 of these packaging machines were in operation, each with a capacity of 30 packages per minute. Many improvements and refinements have been made since that time, but this type of equipment is still the basis of Jell-O packaging today in four modern push-button-control plants located at Le Roy, N. Y.; Hoboken, N. J.; Chicago and Los Angeles—all of which are models of efficiency in food production and packaging. In these plants the company prints its own cartons, as well as makes the bags.

A MODERN PACKAGING All-America Package Competition award was given to the Le Roy plant in 1939 "for the installation of a carton-printing press producing savings over previous costs in excess of 25%." The installation as reported at the time* consisted of "two presses, each of which prints carton blanks from a roll of board by a combination of gravure and letterpress methods. Each press—in addition to printing—scores, die-cuts and delivers the finished blanks ready for the gluing operation."

"The installation," said the All-America citation, "is unique for several reasons. First, this represents one of the few instances in which gravure has been used for printing cardboard. Secondly, the machine has been developed in such a manner as to permit a degree of register control which had not been possible by previous methods. Finally, by performing all operations on a single machine, the company has succeeded in effectively speeding up production, cutting waste, reducing handling and reducing floor areas devoted to the production of cartons."

Company records give considerable credit to the "sales advantage derived and maintained for 17 years from the seamless, waxed-paper bag." The recipe booklets at the time of the development featured the package.

Copy on the back cover of one such booklet printed in 1918 reads: "This is the Jell-O Safety Bag that encloses Jell-O inside the package. To keep Jell-O sweet and clean and preserve its flavor in full strength, it is enclosed in the famous 'Safety Bags' before it goes into the packages in which it is

* See MODERN PACKAGING, March, 1940, p. 292.

PREPARED PUDDINGS were introduced under the Jell-O name in 1932. Vertical designs distinguish puddings from gelatin flavors. Currently the pudding and pie-filling packages have been redesigned with color illustrations of dishes that may be made from the contents. Polka-dot backgrounds distinguish tapioca puddings. Plaid is used for rice pudding.

sold. These bags are made of waxed paper and so sealed as to be airtight and proof against dampness in all climates and under all conditions." On the same page, beside an illustration of the complete package, was printed (indicating that Jell-O, too, probably had troubles with imitators): "This is the Jell-O package complete. Jell-O is never sold in any other kind of a package than the one shown here at the right. Be sure the package you get has the word Jell-O on it in big red letters." Even then it was "Look for the big red letters on the box!"

Today's package

And those big red letters made famous on the Jack Benny radio program and in other promotion, are still there. In fact they have been getting bigger and bigger to meet the growing need for greater package visibility in modern self-service merchandising. On the new 1950 packages currently being introduced, the red letters have been neatly adapted to a slogan on the top panel—"America's red letter desserts"—which replaces the famous Jell-O girl, dropped from the package for the first time since she was put there in 1908, having at last outlived her usefulness as an advertising symbol due to newer and more modern trends in promotional appeals

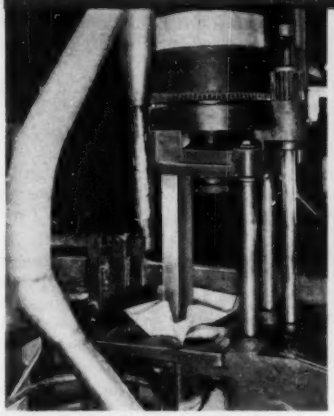
Basically, however, today's Jell-O packages have lost none of the identity of the originals. Comparisons of the early packages with today's show how skillfully the memory value of the old has been translated into modern lettering and type styles. The outline lettering on the old package has given way to strong, modern, sans serif lettering. The decorative ribbon band has lost a few curlicues and instead of carrying the former selling copy, "delicate, delightful, dainty" is used simply for the product name, "gelatin dessert."

Flavor names are given greater emphasis and printed in distinguishing colors. The color band around the base of the package also is printed in the identifying flavor color. Ingredient information is now given on the top panel where the Jell-O girl used to be, permitting more display area and less clutter on the face of the package. Also eliminated is a former color band around the top and ends of the carton.

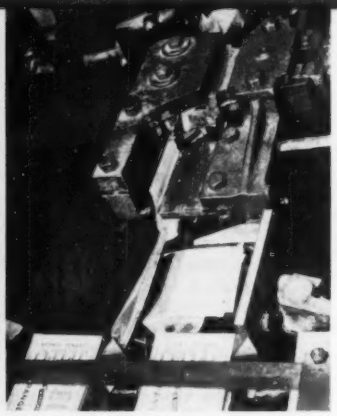
Back panels, as they always have, carry directions for use—edited with meticulous care by the company's Consumer Service editorial department and planned for maximum legibility in small space. General Foods has learned that the success of its products depends greatly on the success a housewife has in preparing them—how the dessert looks and tastes at the dinner table. Few companies plan their directions and recipe copy more carefully.†

Even the molded Jell-O Christmas tree on our cover had to be made and tested in GF's Consumer Kitchens for quantity of product in relation to the size of the mold before it could be released to the photographer.

Making the famous seamless



SINGLE SHEET of waxed paper is drawn through the fluting and forming die. Filling is done simultaneously as the Jell-O comes down through the plunger tube from hopper above.



CRIMPED-SEALED BAG is turned over and inserted into the carton automatically. Principle of this packaging has become basic pattern for practically all similar products.

Other Jell-O products

The record-making name of Jell-O for gelatin desserts led General Foods to introduce a whole line of prepared pudding mixes under the Jell-O name, the first one marketed in 1932. Today, in addition to the famous six Jell-O gelatin flavors (strawberry, raspberry, cherry, orange, lemon and lime), there are three Jell-O puddings (chocolate, vanilla and butterscotch) and three Jell-O tapioca puddings (orange-coconut, chocolate and vanilla)—a total of 12 products sold nationally under the Jell-O name. In addition, there is a new Jell-O Rice Pudding with limited distribution; Grape Jell-O, which is being test marketed, and Jello Pudding and Pie Filling in lemon and coconut-cream flavors—also in the test-market stage.

The pudding packages are distinguished from the Jell-O gelatin dessert in that the cartons are printed vertically instead of horizontally and in certain flavors with identifying polka-dot and plaid background designs. All, however, carry the identifying red-letter trade name "Jell-O." Different background colors differentiate the flavors.

The construction of the pudding package also differs from that of the gelatin-dessert packages in that the inner bags are center-seal pouch type and made of glassine to impart greaseproofness, a quality not required for the gelatin-dessert packages. The inside bags are not sealed, but merely folded over the length of the bag, which gives adequate protection against moisture.

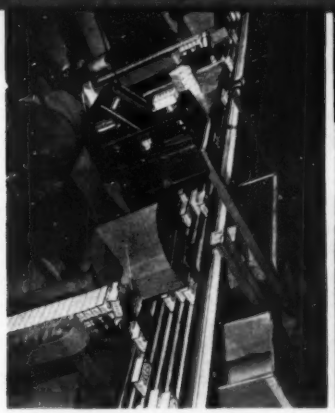
Surface design of the pudding packages is now being changed in line with current trends to include color illustrations of recipe that may be made with contents.

Advertising and promotion

From the very beginning Jell-O's success has been built on its shrewd

† See "Packaging Copy Planning," MODERN PACKAGING, April, 1948, p. 109.

waxed-paper bag-in-a-carton



COMPLETE PACKAGES are then carried from the packaging machines to the case packer on a six-track conveyor, one for each six flavor. The weighing machine is shown in center.

SHIPPING CASES holding individual packages are loaded automatically with complete variety of Jell-O flavors as they come off the six-track conveyor directly from packaging lines.

sales and advertising policies. Originally in the patent-medicine business, Orator F. Woodward was experienced in all the advertising and selling tricks of his day. When he began distributing free house-to-house samples of a 10-cent package of Jell-O, the product took hold and people came to know it and like it. Consistent use of advertising in women's magazines continued to put over the Jell-O story. And the famous recipe booklets took it right into the kitchen of almost every home in America.

General Foods participated in one of the first advertising campaigns when it joined with the Borden Co. and others in 1928 in sponsoring the Radio Household Institute. By 1933 Jell-O had its own program—the Wizard of Oz series, for which it paid NBC a modest $51,214. Then came Jack Benny.

The association of Jell-O with Jack Benny was one of the most famous in radio-advertising history and, along with progressive packaging and merchandising policies, is considered by trade observers to have been perhaps the greatest factor in recent years in building Jell-O sales to their present staggering total.

Jell-O sponsored the Benny program for 10 years, from 1934 to 1944. In literally millions of American homes, over hundreds of Sunday evenings, listeners settled back with a smile of anticipation at the familiar greeting "Jell-O again! This is Jack Benny," and they stayed to chuckle over Don Wilson's exuberant banter about the "six delicious flavors," and the quartet's merry jingle ending with a crescendo "J-E-L-L-O!"

The charm of the Jack Benny touch is hard to define, but it has kept him at or near the top in listener ratings for close to 20 years and made him the star salesman of the air waves. As between Jack Benny and Jell-O, it is a question who did most for whom. Jack was certainly instrumental in keeping Jell-O the best-selling gelatin dessert during the period of its toughest competition and, on the other hand, the General Foods people were instrumental in developing the good-humored, easy-to-take, tuneful touch on commercials, which has since become recognized as the Jack Benny style. Benny and Jell-O were linked in the public mind as a pleasant experience, a happy time. When Benny finally shifted to another sponsor in the fall of 1944, people were heard to say that it didn't seem quite right; they missed that familiar "Jell-O, again" greeting.

It was an amicable parting when Benny and Jell-O went their separate ways. There was no official explanation and the advertising trade has been able to adduce only two logical reasons for the break: (1) that Benny and his large cast were becoming excessively expensive at a time when most advertisers were turning to the popular and inexpensive quiz shows and (2) that after 10 years of Benny it seemed to General Foods that a change to other media might be equally or even more effective.

According to the New York *Times*, General Foods in 1940 was devoting more than three-quarters of its Jell-O advertising appropriation to Benny, paying him about $630,000—in addition to the network cost—for 35 half-hour appearances. When Benny signed for his eighth year with Jell-O, in the spring of 1941, *Newsweek* estimated that he had an audience of 40,000,000 listeners. But in the seasons starting in 1941, '42 and '43—which also coincided with the start of World War II—Benny's listener rating dropped from 1st to 5th or 6th and this may have had something to do with General Foods' decision to change.

Even before the Jack Benny era, General Foods Corp. had one of the biggest advertising budgets in all industry. In 1934 *Fortune* totaled up *known* GF advertising expenditures (*This article continued on page 192*)

PUSH BUTTONS control automatic weighing of ingredients ahead of mixing machine in Chicago plant. Note separate buttons for each of the six flavors.

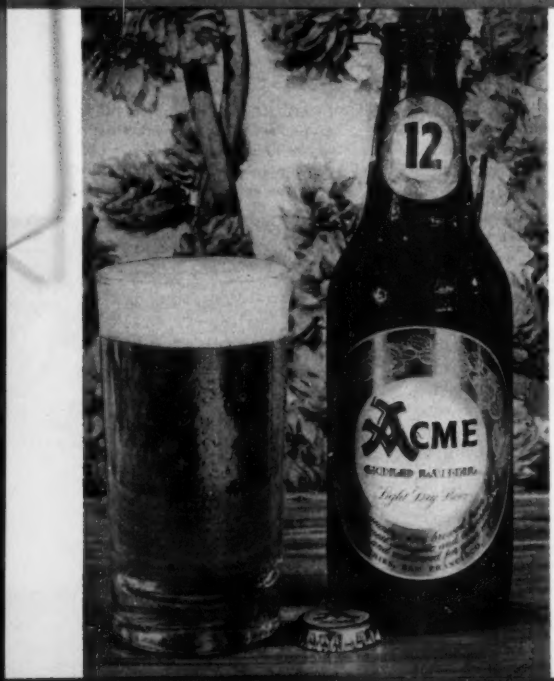
DESIGN

Playing-card packages with playful motifs

Gift selling of playing cards demands constant attention to package novelty. Brown & Bigelow, St. Paul, Minn., is rolling up sales with these package themes that fit "occasional" interests.

The Treasure Chest, containing four packs of cards, is suggestive of a pirate's treasure and is made of redwood, bound with metal strips equipped with hinges, chain stoppers and hasp. The Fiesta Canasta set is on the humorous side, showing Pa and Ma Philospher. The Rio Canasta package is a playing tray by itself. The Dog House set is intended for purchase by individuals who have committed a social or business error and want to be restored to favor.

All of these gift packages, as well as those for the more than 800 items in their gift line, are made in Brown & Bigelow's own box factory and are designed by the company's own staff of artists.



Million-dollar beer label

Gold-colored, aluminum-foil labels on one-way beer bottles have been adopted by Acme Breweries, San Francisco, to promote Acme's new "million dollar Gold Label beer." The million-dollar figure represents the amount the company says it has invested in research, new brewing equipment, laboratory and consumer tests and packaging. The new label replaces the company's Bavarian hop girl label. No change will be made on the Acme "glass of beer" can introduced last April (see MODERN PACKAGING, April, 1950, p. 99). The gold label is highlighted by a delicate imprinting of hops and leaves within the gold oval band. The center features the Acme name in red and black on white. Heavy advertising and merchandising promotion support the introductory campaign. Radio, television and a full array of point-of-sale material will be employed in the program.

CREDITS: *Labels, Pacific Coast Foil Co., San Francisco. Bottles, Owens-Illinois Glass Co., Toledo. Crowns, Western Crown Cork & Seal Co., San Francisco, and Mundet Cork Co., New York.*

HISTORIES

Sales ahoy for shrimp in plastic re-use jars

Consumer sales of "Shrimp Ahoy" shrimp cocktail have increased considerably with the adoption of a new package consisting of a polystyrene bowl and polyethylene cover, reports the Miami Packing Co., Inc., South Hackensack, N. J. Losses due to breakage have been eliminated, the company says, and the plastic containers have cut down freight costs in shipping. Retailers find the new packages convenient to stack and easy to handle in store refrigerator cases. Consumers like the re-use feature of the container for storing leftovers. The wide area for trade and product identification on the large cap has created additional consumer interest, as the printing on the cover is a constant reminder of the manufacturer.

CREDIT: *Jar and cover, Rogers Plastic Corp., West Warren, Mass., using Monsanto polystyrene and Bakelite polyethylene.*

Acid in polyethylene jug

Large molded polyethylene jugs for hydrofluoric acid adopted by Baker & Adamson Products, General Chemical Div., Allied Chemical & Dye Corp., New York, offer a new industrial convenience in handling this highly corrosive chemical. The new plastic jug is reported to provide a shatterproof, tough, acid-resistant, easy-to-handle package that will not develop dangerous leaks common to the lead containers previously used. It is used to ship 10 lbs. of B & A Technical Grade HF acid. The package weighs only 2 lbs. and is said to overcome the difficulties experienced with the former heavy 17-lb. lead containers. The jug is sealed with a screw-type polyethylene cap, making opening and reclosure easy. The neck and lip of the bottle are specially designed to assure clean, accurate pouring.

For convenient shipping, four of the jugs are cell packed in a standard returnable shipping case. Single jugs are packaged in wirebound boxes. Being exceptionally light, the polyethylene jug permits the buyer to save freight charges on 15 lbs. tare weight for each 10 lbs. of hydrofluoric acid shipped.

FASHION APPEAL is emphasized in the new Trend Tones tube and carton. Style newness of the colors is the creation of Margery Smith, color consultant for General Paint. Each panel on cartons and tubes bears her signature on a yellow bull's-eye. Background color of tube is red; product name is printed in white script; accent bands are black.

COLOR PLANNER display simplifies selection of paints for the important new paint customer—the woman homemaker. This convenient merchandising unit holds individual color samples of Trend Tones. Colors are designed to harmonize with latest styles in draperies, floor coverings and interior decorations.

HIGH-FASHION

The one-shot paint-color tube, which is today firmly accepted by the consumer as a packaging sesame to wider and better color selection, has presented the paint manufacturer with a new set of merchandising conditions.

The General Paint Corp. of San Francisco, for example, found that an entire change in package design was demanded in order to reach effectively the market for its new color system. General Paint was one of the companies that had adopted the one-shot tube as a new method of merchandising paint. Basically this method consists of packaging paint pigments in a single-use metal collapsible tube. The contents of the tube are emptied into the standard pail of white paint to produce the desired color.

The advantages claimed for this method are many. It makes the retailer's inventory problems much simpler and enables him to offer the consumer a much wider choice of colors. It removes the guesswork from matching up colors, which has always been a ticklish task even for the experienced painter.

There is still another advantage, one that was not fully appreciated in the beginning. The easy-to-buy and easy-to-handle one-shot tube of color was a "natural" for the new postwar paint purchaser—the housewife. This purchaser was conditioned by interior decorating magazines and home-fashion suggestions to be wonderfully receptive to the new range of colors made possible by colors in tubes. Moreover, continuing sales analyses by General Paint indicated that the motivating factor in postwar paint sales was not only color, but also a desire to redecorate rather than the need, as was true in the past, to repair.

To meet these changed marketing conditions, General Paint undertook its major redesign program. The basis of this "dress-up" program is a current recognition of the vital role played by "high fashion" in merchandising paint.

For paint can no longer be regarded as a prosaic item of merchandise. General Paint today offers 52 basic Trend Tones selected by the San Francisco color stylist and consultant, Margery Smith. Selection of Trend Tone colors was made with special regard for appeal to home decorators and to match color schemes of latest draperies, floor coverings, wallpapers and fabrics.

With the Trend Tones line established, a method of merchandising was needed that would serve to continue the accent on paint as color and decoration and which would, in itself, be sufficiently decorative to attract a woman who was decorating her home. At the same time, the appeal to the dealer was necessarily paramount, since paint is not a self-service item, and the dealer was primarily interested in offering the widest range of colors

with the very least possible inventory.

General Paint's advertising department went to work on the problem and came up with the "Color Planner," a new conception in paint merchandising, coordinating color with job and self-help information and directing the purchaser to other General Paint products useful in completing the redecoration.

In action, the system is simple. The customer selects the colors she wants from large Trend Tones color samples on the Color Planner. Listed on the back of each color sample is the code number of the tube required to get the color. The tube when mixed into the standard General Paint whites—one-coat flat, gloss or semi-gloss—produces the color shown on the color sample. This makes the problem of paint selection easy for both the customer and the dealer.

All further promotion plans centered around high-fashion appeal to convince dealers, as much as consumers, of the style newness of the colors. As part of this high-fashion appeal, a package design with a modern feeling was developed for the Trend Tones tube and carton by an independent designer working closely

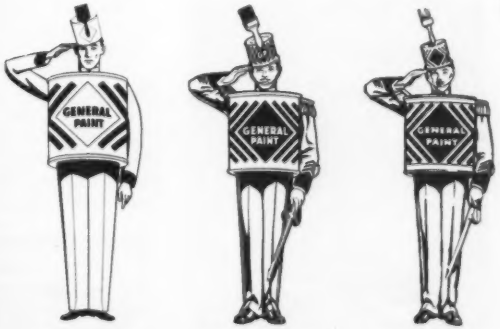
DESIGN SIMPLIFICATION is shown in surface treatment for new color-in-oil tube. General Paint's emblem, yellow diamond in a red field, is now featured.

BRIGHTER DESIGN for wallpaper-cleaner packages takes its cue from the Trend Tones carton. "Flex," the old package name, though heavily promoted, was discarded for a new design with strong product identity.

PAINTS

A NEW MERCHANDISING APPROACH IS MADE POSSIBLE BY ONE-SHOT COLOR TUBE, LEADING TO PACKAGING REDESIGN

EXPERT COLOR SELECTION is assured by Margery Smith, shown here carefully checking color choices against new styles in decorator's drapery fabrics.



NEW GENERAL OLD GENERAL ORIGINAL GENERAL

TRADEMARK RESTYLED. Another step in the General Paint program was a modern appearance for the "Saluting General." Recognition is retained, but he is less austere.

with the company's advertising department. Ultra simple in conception, the new package utilizes the prestige value of the company's color stylist, with her photograph and signature on each carton, matched against the white script lettering of "Trend Tones" on a red background appearing on each panel. The half-tone illustration and informative copy, printed in red, appears at one end of the carton on a yellow background, as does the trademark on the end flap. Bands to accent company name and "color concentrate" are printed in black. The trade-name design is repeated on the tubes in the same color scheme.

Code numbers, keyed to those on the backs of the color chips, are imprinted on the white patch at the end of each carton to identify contents. No color names are printed on the packages, probably because it is customary for the dealer to mix the colors with the base paints in a power beater to assure accurate results. This practice apparently eliminated the need for identifying color patches on the packages themselves.

Response to the new tube from dealers in 14 states was so immediate and so favorable it convinced General Paint management of the sales value of package redesign throughout its entire product line. First to be dusted off and improved was the famous "Saluting General" trademark.

The principal objectives set up were to make "The General" more modern and less austere, easier to reproduce and at the same time capable of retaining consumer good will and recognition. Eight different artists and industrial designers were consulted and asked to submit sketches. These were narrowed down to several which were reworked to the final approved and accepted design.

Other packages to come in for a major overhauling were the company's wallpaper cleaner and its color-in-oil tube. Principal change in both cases was a simplification of package and the choice of modern type faces to carry out the new high-fashion theme. The color-in-oil tube additionally was tied in with the predominant General Paint identification—a yellow diamond in a red field.

Package redesign within the General Paint Corp. is continuing, for the increased sales among those products, which already have received new styling, point to further benefits from coordinating exterior package design with the company's basic selling theme —color as decoration.

CREDITS: *Tubes, The Sheffield Tube Corp., New London, Conn. Cartons, Fibreboard Products, Inc., San Farncisco. Label design, Bernard Bolter, San Francisco.*

Fleischmann's adopts the nitrogen pack

Longer shelf life and a more convenient product for the consumer are the objectives Standard Brands, Inc., New York, had in mind in adopting a laminated Pliofilm-metal-foil, nitrogen-filled package for Fleischmann's New Improved Active Dry Yeast. The Fleischmann's new pack is displayed and sold as an individual item so that the consumer can have dry yeast for any of the uses for which the fresh compressed yeast cake is used. A similar package developed by Pillsbury Mills for their Hot Roll Mix appeared earlier this year.* The Pillsbury yeast package was packed with the roll mix and was intended for sale as a separate item.

LONGER SHELF LIFE for Fleischmann's dry yeast is provided by a laminated Pliofilm-metal-foil, nitrogen-filled envelope that gives living yeast cells greater stability and protects yeast from air and moisture.

The chief advantage of active dry yeast packed in a nitrogen-filled, laminated metal-foil container is the stability conferred upon the living yeast cells, with the result, according to Standard Brands, that shelf life of five to six months, or longer if refrigerated, can be expected.

The new Fleischmann's package is flexible, airtight and moistureproof, thus meeting the chief packaging requirements for the semi-perishable, hygroscopic product. Since active dry yeast respires slowly, vitality and fermenting strength is improved by substituting an atmosphere of nitrogen and thereby removing any substantial amount of oxygen. Temperature is also an important factor. When packed in nitrogen, dry yeast is not significantly affected by average room temperatures, the manufacturer claims. Continued exposure to temperatures in the range of 100 deg. F., however, greatly shortens product life.

In developing the new package, Fleischmann's manufacturing division had to make considerable change in packaging equipment, which previously had handled laminated-glassine paper as the packaging material. This package was not gas filled. The new process consists of allowing a little nitrogen to flow into each package as it is filled and heat sealed. Then the packages are cut. Recently several completely automatic vertical-type machines have been acquired to package the yeast, fill the nitrogen, and seal and cut the bags.

Consumer reception of the new, improved yeast and the new package is said to be enthusiastic. Although packaged yeast is a low unit-cost item, it has a plus value for the retailer because it stimulates sales of other products. Customers who buy yeast are in the market for milk, sugar, flour, salt and many other profit makers used in baking.

CREDITS: *Foil lamination, Reynolds Metals Co., Louisville, Ky., using Goodyear Pliofilm. Packaging machinery, (concerted models), Ivers Lee Co., Newark, N. J., and (new models) Transparent Wrap Machine Corp., Hasbrouck Heights, N. J.*

* See "Flexible Gas Pack for Yeast," MODERN PACKAGING, April, 1950, p. 124.

Appetite-appeal sugar cartons

TECHNIQUE OF ILLUSTRATING FOODS TO BE MADE FROM THE PRODUCT IS ADOPTED BY SAVANNAH IN NEW TELESCOPE-RECLOSURE PACKAGES

In the packaging of food products which of themselves are not photogenic, many firms have found that sales can be stimulated by the appetite appeal of color illustrations of ready-to-eat food dishes and by recipes using the product as an ingredient. Many times, and very successfully, this technique has been used for coffee, cocoa, flour and cake mixes, packaged desserts, etc., as well as for all types of canned foods. The Baker's Cocoa girl with her tray of steaming hot chocolate is a historical example. So far as is known, this method of presentation has not until now been used for a common ingredient like sugar.

The first to do it is Savannah Sugar Refining Corp., Savannah, Ga., which has just changed its entire line of cartons for special sugars from the conventional style to designs illustrating the end use of their sugars for icings, frostings, tarts, pineapple upside-down cake—all in full color.

Use of illustrations on the sugar cartons was suggested by Savannah Sugar early in 1949. Development of designs for the products to be illustrated and of recipes for the back panels of the cartons has been a cooperative effort between Savannah Sugar, its advertising agency and its package supplier.

Unlike granulated sugar, specialty sugars such as browns and powdered are not food items in everyday use. The housewife can get by without them. Surveys indicate that at least 25% of the specialty sugars are bought on impulse. The new Savannah sugar packages, showing full-color illustrations of delicious foods which can be made with the special sugars, are thus designed to stimulate impulse buying and thereby increase sales.

Introduction of illustrations on the package had to be accomplished without loss of package identity and family resemblance. For that reason, letter styling and carton design are very similar, both in color and design, to the previous cartons. A blue background is used for the confectioner's sugar and two shades of brown to distinguish the light- and dark-brown. Later on additional illustrations and recipes will be added to the series.

Savannah Sugar has long prided itself on being a leader in sugar packaging. The company claims it was the first to offer the grocer factory-packed paper bags of sugar in consumer units—which has almost entirely eliminated "store packing" in bags.

Savannah Sugar is also the first refiner to use a popular new "reclosure" type of carton for their brown and powdered sugar, a convenience that has brought praise from the housewife.

This patented reclosure carton has a perforation 1 in. from the top, all around the carton. When the thumbnail is run around the perforated line, the top of the carton lifts off. To reclose, two corners of the carton indicated by triangular score lines are pressed in and the cover then fits back snugly in telescope style.

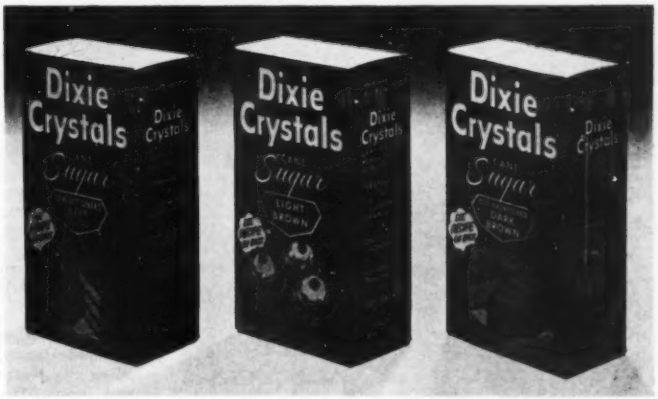


PHOTO COURTESY ROBERT GAIR CO., INC.

MOUTH-WATERING DESSERTS to be made from specialty sugars are pictured to increase sales of these impulse-purchase items. Illustrations are in full color. Background color for confectioner's sugar is blue; light-brown and dark-brown sugars use those colors on the carton.

RECLOSURE FEATURE is unusual for sugar cartons. To open, break perforation and lift off the top. To reclose, press in the scored corners of the carton and the cover fits on tightly, in telescope style.

CREDITS: *Cartons, Robert Gair Co., Inc., New York. Reclosure feature patented and licensed by Chicago Carton Co., Chicago.*

PACKAGING PAGEANT

1

1 Nestle's entry into the ready-mix field with a Cookie Mix demanded a package to associate the new product with a famous brand of chocolate products and to create appetite appeal. This is done with a seal-end folding carton printed in five colors and varnished, showing the cookies that may be made with the mix and complete recipe information on the back. Design, Alan Foster Associates, New York. Cartons (Fidel-l-Tone process), The Lord Baltimore Press, Baltimore, Md.

2

2 A die-cut carton in the shape of a Holland windmill makes an appropriate holiday setting for National Distillers' de Kuyper cordials. Windmill blades are yellow and brown. The mill is green with an orange roof. Doors open to display the label of the bottle inside. Carton, American Coating Mills, Div. of Owens-Illinois Glass Co., Toledo, Ohio.

3 Box-cover designs for Hayward Hosiery Co.'s Thread-O-Life stockings have been improved to offer more color, greater simplicity and vertical arrangement for easier shelf and counter handling. A graceful leg and spiral thread motif adds attention-getting power and memorability. Colors are coral pink and powder blue. The new "Swish" line is boxed in a coral-on-dark-green box. Design, Margery Markley, New York. Printing, Forbes Lithograph Mfg. Co., Boston. Boxes, Friend Box Co., Danvers, Mass.

3

4 Powder nail polish—by-passed for years by millions of women in favor of lacquer polishes—should win new popularity in these miniature shaker-type containers recently adopted by Cutex. The container is burnished brass

4

with a red cap. The unit, no bigger than a lipstick case, is stapled to an individual display card.

5 To add point-of-sale punch to the Dixie package line, Dixie Cup Co., Easton, Pa., has put its Medicine Dixie, Jigger Dixie and Hawaiian (hot drink) cups for home use in a tray package, machine-overwrapped with cellophane. The full line of tray packages will be color coded as to product use. Extended research and testing have been made to assure durability and color combinations suited for merchandising the product in supermarkets and chain stores. Color study, also, was essential to assure a pleasing match for the enclosed, but visible cups.

5

6 The stippled glass bottle for Blue Label Tomato Juice Cocktail, packed by Curtice Bros. Co., Rochester, N. Y., was designed to suggest the shape of a cocktail shaker. An attractive blue, red and yellow label pictures an appetizing glass of tomato-juice cocktail. The container holds 1 pt. and 10 oz. of juice. Bottle, Owens-Illinois Glass Co., Toledo, Ohio. Metal closure, White Cap Co., Chicago. Label, Stecher-Traung Lithograph Corp., Rochester, N. Y.

6

7 To increase unit sales and to encourage year-'round gift purchases, The Sears Roebuck Co. have adopted a package to hold three pairs of their Pilgrim men's shorts that displays the product and presents a strong, clean, masculine design. The new transparent window box, reportedly, has not only stimulated sales increases, but has actually lowered packaging costs. Design, Gerald Stahl, New York. Cartons, Acme Folding Box Co., New York, using Celanese Corp.'s "Lumarith" cellulose acetate.

7

8 Accent is placed on smart display packages for Moth-Chek products manufactured by The Puro Co., Inc., St. Louis. The 1-lb. lithographed metal can contains moth crystals; the hang-up dispenser contains a moth cake and is perforated to permit evaporation. The small container, which merchandises the standard moth cake, is fibreboard. The identification label and direction label are unified by design treatment. These panels are cardinal red and black, respectively, with black and white lettering. Design, Barnes & Reinecke, Inc., Chicago. Metal cans, Cans, Inc., Chicago. Fibre cans, Sefton Fibre Can Co., St. Louis, Mo.


8

9 Thrift and eye appeal are combined in the red, black and gold tartan gift package for Gilbey's Spey-Royal Scotch whisky, product of National Distillers Corp. The textile plaid bag, with label applied, has an appealing holiday look and is designed for re-use as a shoe bag or knitting bag. Bag and tie, Homer-Alden Co., North Attleboro, Mass. Label, Progress Lithographing Co., Cincinnati, Ohio.

9

10 Hermetically sealed in lithographed key-opening metal cans, marshmallows packaged by Candyland, Inc., Sioux City, Iowa, offer both eye appeal and flavor freshness. Said to be moderately priced, they can be stored indefinitely, thus offering shelf advantage to the retailer and to the consumer. Metal cans, American Can Co., New York.

10

11

11 To speed sales in busy retail stores, McKee Glass Co., Jeannette, Pa., is using a new five-feature label for its line of Glasbake kitchenware. Complete information—style of item, size, price and guarantee—are featured so that customers can make their selections while the salesgirl completes another sale. Labels provide stock number for easy re-order. Labels, Kelly Printing Co., Greensburgh, Pa.

12 Family design, simplified packaging specifications, strong identification and easy-to-understand directions were the objectives of the newly designed packages for industrial ceramic products manufactured by Gladding McBean & Co., Los Angeles. The newly designed, identifying emblem, printed in distinguishing colors on a standard yellow background makes contents easy to differentiate and preserves family identity. Design, Charles Cruze, Los Angeles.

12

13

13 Weissner's Regal Beer label was designed with a white background for a definite purpose. The entire advertising campaign is built on the principle that white suggests purity and quality. All trucks are painted white and all promotional matter makes major use of the white idea. Labels, Gamse Lithographing Co., Inc., Baltimore, Md.

14 Two striking packages for electrical tape have been adopted by Plymouth Rubber Co., Inc., Canton, Mass., to provide easier and more convenient handling by electricians. One container, a single-roll lithographed metal can, holds one 60-ft. roll of plastic tape. A five-pack fibre can contains 30-ft. rolls. Metal cans, George D. Ellis & Sons, Inc., Philadelphia. Fibre cans, The Marshall Paper Tube Co., Randolph, Mass.

14

15 Lady Esther's new hand cream shows that something different can be done to give distinction to an opal-glass cream jar. The white cap matches the foot on the jar in color, height and diameter, leaving the space between the cap and foot for a wrap-around foil label. The recessed position affords label protection. Design, Barnes & Reineke, Inc., Chicago. Jar and cap, Hazel-Atlas Glass Co., Wheeling, W. Va. Labels, F. N. Burt Co., Buffalo, N. Y., and A. M. Steigerwald Co., Chicago.

16 Gaily colored in yellow, red, blue, white and green, the new toy carton used by Humpty-Dumpty Toys, Inc., Seneca Falls, N. Y., shows the exact contents of the famous Schoenhut Humpty-Dumpty circus figures. The illustration depicts the circus toys set up in a regular "Big Top" act. Cartons, United Board & Carton Corp., Syracuse, N. Y.

17 Importance of industrial packaging that provides better protection, easier handling and greater compactness is indicated by the new packages adopted by Dodge & Olcott, Inc., New York, for their perfumery and flavoring products.

15

PACKAGING PAGEANT

16

The amber-glass bottle has a pour-clean lip. The easy-to-grip plastic screw cap and protective liner are designed to permit frequent handling. Closures are sealed with a secondary shrink-type closure. The shipping carton has been redesigned for easy order-filling, one that permits handling the contents of a shipment in several small cartons without excess use of packing materials. Bottles, Owens-Illinois Glass Co., Toledo, Ohio; Anchor Hocking Glass Corp., Lancaster, Ohio; Armstrong Cork Co., Lancaster, Pa. Screw caps, Owens-Illinois Glass Co. "Cell-O-Seal" closures, E. I. du Pont de Nemours & Co., Wilmington, Del. Labels, Muirson Label Co., Inc., Brooklyn.

17

18 Light-weight bottles designed for extensive use on British airlines—B.O.A.C. and B.E.A.—have been adopted for House of Parliament sauces. The bottles are 5½ in. high. Instructions in English, French, Spanish and German are printed on the full wrap-around label. Design, Richard Lonsdale-Hands Associates, London, England.

19 Nylon casting lines, product of the Newton Line Co., Homer, N. Y., now come in a new "Twin-Pak" container with individual plastic spools and dustproof covers for each 50-yd. put-up, available singly or in two spools connected. The transparent containers enhance gift appeal. The spool sections provide handy re-use compartments for hooks, sinkers, flies, etc., when line is removed. Backer-card displays, featuring the Newton trademark, dramatize the "Twin-Pak" on the counter. Polystyrene containers, Consolidated Molded Products Corp., Scranton, Pa. Foil label, F. E. Mason & Sons, Batavia, N. Y. Paperboard display, F. M. Howell & Co., Elmira, N. Y.

18

19

FAMILY RESEMBLANCE of canned and frozen foods is achieved by adopting window-label feature of earlier frozen-food package for can labels and using similar brand-name reverse block. Frozen-food sales increased 60% with this design.

More 'windows' for Dulany

FROZEN-FOOD LABEL TECHNIQUE IS EXTENDED TO CANNED FOODS, PROVIDING A STRONG FAMILY DESIGN FOR THE ENTIRE DULANY LINE

Taking a leaf from the success story of the company's frozen-food package design, Dulany's new canned-food labels similarly create a powerful illusion of a window looking directly into the package. What the customer sees is a brilliant and realistic full-color reproduction of the food product, the whole product and nothing but the product.

As with Dulany's frozen-food packages, redesigned two years ago,* the objective is to create the strongest degree of appetite appeal possible so that the product will have maximum sales potential in self service and with new customers, as well as for those already familiar with Dulany's 50-year reputation for quality.

The new labels tie in design-wise with the frozen-food packages to keep benefits of the total merchandising influence produced by promotion and consumer acceptance all in the family.

The window effect on the redesigned labels for canned goods is achieved with a natural-color food-product reproduction banded horizontally across the front panel. In contrast with the former label, much less of the surface is lost to white background.

The selling power of this type of label, which completes Dulany's redesign program, has been thoroughly proved by the company's experience with the frozen-food package. Late in 1948, when the frozen-food package made its first appearance, the industry as a whole was struggling with an acute merchandising problem. Sales, which had been lagging throughout the industry, showed a quick recovery for Dulany products in the new wrapper. Dulany jobbers became so enthusiastic that they offered to underwrite the cost of destroying stocks of old wrappers in order to get the full line of 32 frozen fruits and vegetables into the new design as quickly as possible.

This enthusiasm was well rewarded, since within three months Dulany frozen-food sales were running 60% above what they were in the old wrappers. This increase still prevails and some items were forced into allocation.

It was found that retailers were giving the attractive new packages preferred space in their freezers and that stocks were being kept in better order because of the stimulus of the new and attractive packages. Best of all, this new package opened up new outlets formerly unobtainable to Dulany, resulting in wider distribution.

The new canned-food label, designed to preserve strict family resemblance to the frozen-food package, gives every early indication of producing the same effect. Jobbers are again enthusiastic. Retailers are again reacting to the stimulus of the new package. Shoppers are consequently seeing more and buying more Dulany products.

Trends interpreted

The label-redesign program is the outgrowth of a careful study of the problems involved in present-day merchandising in retail food stores. Dulany engaged an experienced independent package designer to work closely with management in analyzing these trends and then to design

* See "Dulany Goes Pictorial," Oct., 1948, p. 118.

the package accordingly. The first result of this program was the redesign of the frozen-food package. Development of the canned-food design had to be postponed while management coped with the problems of expanded production of frozen foods.

Recently the designer was commissioned to apply the principles of design used for frozen foods to the canned-food line.

Investigation showed that today's women shoppers prefer neat, uncluttered design and light colors for backgrounds, which seem to suggest a sanitary quality for food products. Interpreted in terms of design, these findings indicated that the new packages must not be tricky, must not contain too much decoration just for decoration's sake, but must achieve a necessary blend of conciseness and appetite appeal.

The new Dulany packages cater strongly to today's shopping habits and buying preferences by using white backgrounds and by careful placement of type matter.

The common practice of showing a picture of peas or beans in a serving dish was rejected, so there would be no unnecessary detail to detract from or confuse the illustration of the product. Since the illusion of a window looking directly into the package had proved so successful on the frozen-food package, the same effect was sought for canned foods.

Great care was taken in selecting vignettes that would produce the utmost in appetite appeal through natural representation of the product exactly as it would appear in the package—not on the vine and not tricked up with sauces or parsley. For fruits and vegetables, the designer suggested, women are no longer impressed by such treatments.

So far as the brand name is concerned, simple white lettering appearing on a dark panel with no fancy shadows to slow down legibility is used to provide the utmost in contrast and is so placed as to lead the eye directly to the appetizing vignette.

The same lettering, type faces and general background and color are used on all packages so that family resemblance will be unmistakable and each Dulany product will work to sell all other Dulany products. The back panels provide consumer information on style, servings, a recipe and a list of other Dulany foods.

CREDITS: *Design, Royal Dadmum, Baltimore, Md. Vignette photography, Greer Studios, Inc., Baltimore, Md. Labels, Stecher-Traung Lithograph Corp., Rochester, N. Y.*

CHANGE-OVER from old label (right) to new window label is shown below. Attention-getting values and appetite appeal are greatly increased in new vignette. Brand name is also strengthened.

ACTUAL SAMPLE shows the remarkable realism of picture-window strip on front of new can label. White background and simple treatment are in line with indications of women's preferences. TIP-ON COURTESY STECHER-TRAUNG LITHOGRAPH CORP.

COUNTER

BIGGER DISPLAY and longer life on cigar counter are won by simple expedient of shipping two 50's boxes of Cigarillos in one easy-to-set-up display carton. Cartons are printed in canary yellow and tobacco brown.

The world's most hotly contested for sales territory is the top of the counter where candy, cigarettes, chewing gum, newspapers and similar items are displayed. At these busy marts millions of dollars in sales to the passing throng are rung up, day and night. The passer-by who suddenly stops, turns and buys a five-cent package of mints does not realize what a battleground the confectionery and cigar counters have become—all because of the customer's inclination to buy certain things without thinking, on the spur of the moment.

It's the impulse purchase that makes this top-to-the-counter space so valuable and so vigorously fought for by jobbers and manufacturers. The particular impulse that makes a passer-by stop to buy a package of mints may be caused by nothing more than a small lithographed poster showing a sprig of mint and a garden wall. Nevertheless, the mint salesman probably had to battle long and arduously to convice the man behind the counter that those mints would sell like mad if only the dealer would let him have a bit of poster space measuring perhaps four by eight inches.

To get and hold more of this valuable counter space, which makes customers out of the passers-by, was the problem facing General Cigar Co. in looking for a better way to merchandise their Robert Burns Cigarillos—the new small, five-cent cigars. The corollary to this problem was, of course, how to design a carton or point-of-purchase piece which would display the most merchandise and attract the most purchasers.

The cigar company took its problems to several of the country's leading packaging manufacturers. One of them produced an ingenious design solution, which is credited with being an important factor in increasing Cigarillos sales 20%.

This increase in sales did not come from any change of heart on the part of smokers. It did not come because dealers had suddenly decided to push Robert Burns Cigarillos. One of the prime contributing causes, according to the company, was that the functional display put more merchandise on the counter—thereby creating a bigger and better impression on impulses of passers-by.

It was a carton which put two boxes of Cigarillos on the counter where only one had been before. It was also a poster which attracted the young man, the middle-aged man and the older man with General Cigar's appealing punch line: "The new idea in smoking."

Cigarillos, as the name implies, are small-sized cigars. A box of 50 Cigarillos does not take up much space and does not make much of an impression quantitatively. The functional unit

SIMPLE CONTRUCTION of cartons, with sides scored on bisecting angles, makes it possible to collapse cartons and ship them flat. Separate-piece cover forms the back and top of display and holds box lids erect.

ACTION

ROBERT BURNS GETS IT WITH A BIG, DOUBLE-SIZED COUNTER CARTON FOR LITTLE CIGARS

holding two boxes of 50 side by side automatically doubled the size of the Robert Burns display. It also kept Cigarillos on top and out front for double the usual length of time.

The psychology behind this "longer time between changes" idea is important. The more merchandise on the counter, the longer the product is assured of its display spot simply because it takes longer to sell the larger quantity.

The new point-of-purchase piece uses no dummies or pictures. This display functions. It sells cigars in their original boxes, two boxes side by side. It uses the cover of the display carton, supported by a unique cantilever principle, as the back piece of the display. The carton is self supporting, self contained. No extra supports or easel are needed. Because it makes for a fast turnover, the dealer is usually inclined to tear the cellophane off a new box and set it up when the first one is empty.

In the case of candy and chewing gum, particularly novelty products, this policy of using displays that stay on the counter a long time is, admittedly, not always best. In fact, packaging confectionery novelties often calls for displays that are short lived—the kind that actually cause dealers to change displays often in order to give counters a fresh look and keep novelty items moving at a fast rate of turnover. However, the combination container-display was just the thing for a cigar like Robert Burns Cigarillos where change was not important. Instead, the Cigarillos carton keeps more merchandise on the counter a longer time and, therefore, proves a most satisfactory display for a standard item like cigars.

Dealers took to the idea the minute they saw the display, the company reports. They liked its simplicity, ease of installing and space-saving features. They liked the way the poster on the display stood up squarely without need of back support. They liked the idea, maybe, because the jobber's man demonstrated the display to them in less than a minute's time.

It is owing to lack of time on the dealer's part that many displays intended for active duty are never even removed from the shipping cartons that contained them. Lack of time is no excuse for a dealer not looking at the Robert Burns carton. The jobber simply rips off the cellophane wrapping, flips back the cover and the display is ready.

The cover is actually a separate piece, with two bottom flaps made to fit under and in back of the cigar boxes which the carton contains. The lids of the cigar boxes give a firm support to the counter display poster (back of the carton cover), supported only by a simple die-cut tab at the top of the card and the cantilever action of that portion of the card that is inserted under the cigar boxes. Both sides of the counter carton are scored on a bisecting angle so that the carton can be made to collapse when empty. Thus, it can be stored and shipped flat.

The Cigarillos display is printed in contrasting canary yellow and tobacco brown, a very pleasing and exciting color combination for a product of this kind. Printing large areas of solid color without imperfection or loss of value is attributed to a special process which reproduces long runs with clarity and fidelity on lowest-cost stock.

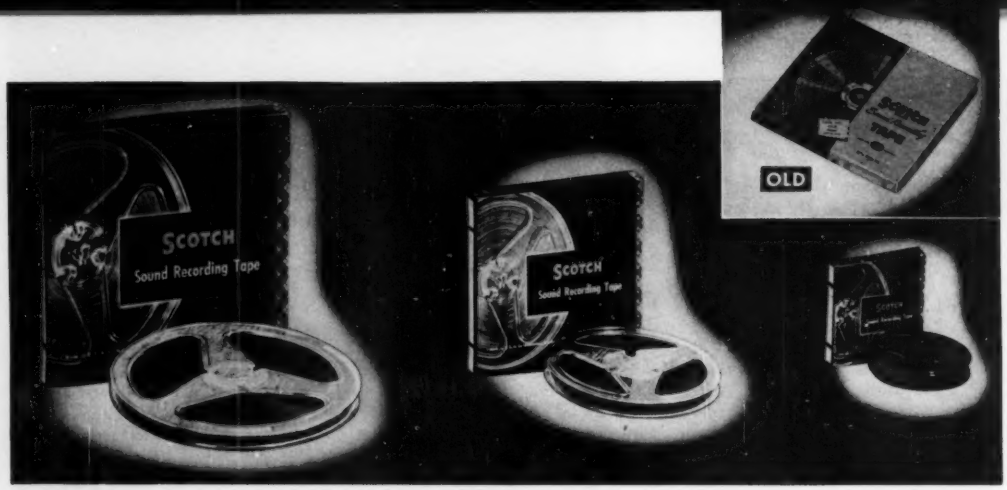
"The Cigarillo is a quick smoke and calls for quick buy-on-sight purchases," says Philip Bondy, vice president of the General Cigar Co. "The new Robert Burns counter carton is ideal for this kind of promotion."

Mr. Bondy's observations are backed by the best proof in the world—a 20% jump in sales.

CREDIT: *Counter-display cartons, The Lord Baltimore Press, Baltimore, Md.*

EASY TO ASSEMBLE, cartons win the favor of dealers who often do not have time for more elaborate constructions. Dealer simply flips back cover, catches box lids under price tab and a display is born.

CELLOPHANE-WRAPPED carton is compact, attractive and easy to handle. Display is ready to set up when protective wrapper is removed.



THREE SIZES comprise new line of Scotch Brand Sound Recording Tape. The photographic illustration now utilized identifies the product realistically. Two different package colors are used to differentiate the paper- from plastic-backed tapes. Old package design (upper right) with drawing of product was more symbolic than descriptive of contents.

Package tune-up

SALES TEMPO QUICKENS WHEN FEATURES OF RECORDING-TAPE PACKAGES ARE BROUGHT INTO CLOSE HARMONY WITH CONSUMER NEEDS

The practical advantages of package redesign to strengthen "use" features are graphically illustrated by the new packages for Scotch Brand Sound Recording Tape.

These advantages are: (1) easier identification, (2) more convenient handling, (3) instructions as a permanent part of the package, (4) better arrangement of back-cover space to facilitate write-in information and filing data.

These package features are all aimed at making the product easier for the customer to buy and use—proved and potent stimulants for upping sales.

Scotch Brand magnetic recording tapes are produced by the Minnesota Mining & Mfg. Co. The tapes are used in homes, schools, radio stations and networks, movies, churches, industry and by recording companies. The $^1/_4$-in.-wide tape comes in 150-, 600-, or 1,200-ft. lengths and is usually wound on a reel similar to movie-film reels.

There was, actually, no dissatisfaction with the previous packages. Minnesota Mining just believed they could be improved. Nearly 50 possible designs were experimented with, but final development and selection of the new packages was made easy by stressing those features that would mean greater package utility for the consumer. Adherence to this objective became a simple guide leading to the following improvements:

Identification is strengthened by reproducing a three-quarter-view actual photograph of a reel of sound recording tape on the cover of each package. To differentiate between paper- and plastic-backed types of tape, two package colors were selected—green for paper; black for plastic. Family continuity is maintained by using the same printing and identification markings on each package.

More convenient handling is provided by converting the existing telescope-style package into a hinged container. The package is hinged by printing the front- and back-cover designs on a single sheet of white litho label stock, then gluing it as one piece to the package's front and rear chipboard covers—so that the overlap from front to rear cover acts as a hinge.

Instructions, affixed to the package, contain hints on how to record, erase, splice and store the tape for best recording results. They are, therefore, an extremely important factor contributing to satisfactory use. Previously, these instructions were printed on a folder that was loosely inserted with each packaged reel and were, of course, easily misplaced or discarded. To make it almost impossible for a user to lose the instructions, they are now made a permanent part of the box. This is done by printing the instructions on two separate sheets of 0.004-in.-thick white book paper laminate and gluing them to the inside front and rear chipboard cover surfaces of the packages. In addition to providing a means for permanent attachment of instructions to the packages, the new method of presentation is found to serve a threefold purpose: (1) ready availability in a handy lo-

cation, (2) utilization of previously wasted space and (3) dressed-up interior appearance of packages.

Write-in space is re-arranged to provide more adequate surface on which to log the contents recorded on the reel of tape. This was done by changing the back-cover design from two separate ruled columns to a single white-paneled square with continuous ruled lines running the width of the panel. The edge write-in space was switched from the bottom-right edge to the left edge and was lengthened from one-third the package width to full width.

Scotch Brand recording tapes come in three sizes. They are put up in 3-by-3-, 5-by-5-, and 7-by-7-in. packages. Packages for the two larger-sized reels are set-up boxes made of 0.033-in. plain chipboard.

The 3-by-3-in. package made of 0.018-in. white patent-coated stock does not employ the hinged telescope feature. Instead, the package is a reverse tuck-in-type folding carton with the cover design printed directly on the container surface, rather than with attached printed cover as used on the 5- and 7-in. sizes. A printed instruction insert is included with each 3-by-3-in. package, because the inside covers are inaccessible.

CREDITS: *Hinged set-up boxes, Mullery Paper Box Co., St. Paul, Minn. Folding boxes, Kaplan Paper Box Co., St. Paul, Minn. Printing, Dawson-Patterson Printers, Inc., St. Paul, Minn. Plastic reels made by American Molded Products Co., Chicago, of Koppers polystyrene. Steel reels, J. L. Clark Mfg. Co., Rockford, Ill.*

IMPROVED FEATURES include new cover design, more convenient hinged-box construction, printed instructions permanently glued inside the covers, ample write-in space on the back and side for logging tape contents. Note the new plastic reel, which is used for the two larger sizes.

COMPARISON of old telescope box with loose instruction insert with new box of hinged construction and instructions secured to box so they cannot be lost.

CONVENIENCE for listing titles is improved by discarding two-column ruling for lines that run the full width of the panel.

Display

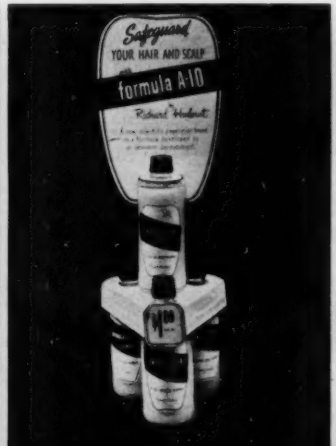
The famed gnomes of Vernon Grant, America's No. 1 "gnome creator," are teamed with Santa Claus to create this eye-catching display for Gillette Safety Razor Co.'s 1950 Christmas gift sets. Grant's gnomes appear as Santa's jolly little helpers, adding their own selling influence on Christmas gift shoppers at point of sale. The display is of paperboard, lithographed in eight colors. Display, Einson-Freeman Co., Inc., Long Island City, N. Y., in conjunction with Vernon Grant.

A complete assortment of decorative ribbons is presented in National Ribbon Corp.'s compact, five-color-lithographed, all-metal cabinet called the Ribbon Round-Up. The "picket fence" at bottom is an 18-in ruler for measuring ribbon as it is sold. A safety cutter attached to the right-hand side of cabinet makes for quick, convenient cutting. Cabinet, Landau Metal Products Corp., Long Island City, N. Y. Back piece, Supreme Displays, Inc., New York.

This colorfully printed combination display-shipping container, made of 200-lb.-test corrugated board, forms a convenient jobber and retailer unit holding 132 assorted molded plastic fisherman's floats marketed by the Air Light Products Co. Formerly, each type of float was packed separately, 1-doz. to each carton. Display container, Gaylord Container Corp., St. Louis, Mo.

An ingenious new counter display for Richard Hudnut Formula A-10 For Men is created by a triangular printed paperboard platform that slips over the tops of three actual bottles of the product. The platform holds a fourth bottle which, in turn, is fitted with a collar holding the selling message. Display, Louis Bressound, New York.

To introduce the new Fluid Color Artist Portrait Make-Up, Dermetics uses this three-dimensional paperboard counter display holding a special introductory offer. Back piece features an artist with his palette. Display, United Lithographing Corp., New York. Bottle design, Martial & Seull, New York. Bottle, Carr-Lowrey Glass Co., Baltimore. Cap, Armstrong Cork Co., Lancaster, Pa.



Gallery

Currier & Ives scenes from the romantic past provide "atmosphere" for the counter display featured in a unique tie-in promotion for the Glenmore Distilleries Co. and the Libbey Glass Div. of Owens-Illinois Glass Co. The display, intended for package stores, specialty shops and glassware departments, presents a decanter with two companion glasses placed on the base. The hanging sign simulates a Colonial tavern guidepost, topped with a marker that reads: "Perfect Gift At No Extra Charge." Display, Associated Display Services, Chicago.

A paperboard display measuring 30 in. high, 22 in. wide and 12 in. deep, highlights the theme, "Make-Up To Her For Christmas," providing an attractive setting for Max Factor gift sets. Light shines through die-cut stars in the three-section illuminated Christmas tree. Display sets up in less than a minute's time. Ample shelf space is provided for showing various merchandising units. Display, Herbert H. Cooper & Associates, Inc., Los Angeles.

Merchandising punch for Prox, a new powdered laundry bleach for home use made by Imperial Products Co., is provided by this three-dimensional red and white counter display, which holds an actual carton of the product, together with one of the five envelopes enclosed in each carton. Display, American Coating Mills, Div. of Owens-Illinois Glass Co., Toledo.

Rubberset shaving brushes, usually slow-moving items, are given sales impetus by this amusing display merchandiser featuring "Joe, the Barber." Behind his transparent acetate apron, seven brushes are displayed on shelves. Display, made of paperboard, is pilferproof, keeps merchandise dust free, permits easy dispensing and takes up a minimum of counter space. Display, Consolidated Lithographing Corp., Brooklyn.

Cannon Mills features it "Go-Girl" advertising of Cannon nylon hose in this lithographed paperboard reprint holder designed for counter use. The "frame" displays the latest advertisement (which can be easily changed) and the die-cut artist's palette shows the actual stocking featured in the ad. Display, Einson-Freeman Co., Inc., Long Island City, N. Y.

Name packaging –here's the

GOT a problem package? You belong in this picture, too.

For these are just a few of the difficult packaging jobs now being done—with notable success—by **Pliofilm.**

Pliofilm is air-moisture-liquid-tight. It controls moisture transfer, to keep moist foods moist, dry foods dry. It's tough, tear-resistant—protects everything from sheets to spark plugs until they reach the consumer. Transparent, it prints clearly, shows off your product at its very best.

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GOODYEAR PACKAGING FILM

3-way protection against air, moisture, liquids

Pliofilm, a rubber hydrochloride—T.M. The Goodyear Tire & Rubber Company

Successful dehydrated foods

WYLER & CO. HAVE FOUND THE RIGHT PACKAGING ANSWERS AND SCORED A HIT WITH CONSUMERS IN A FIELD WHERE MANY FAILED

Today's busy housewife is always interested in food products which simplify shopping, storage and meal preparation—as long as they measure up to her family's taste and quality standards. Among the food-products manufacturers who have achieved this goal, by means of dehydration, and are packaging most effectively for product protection and coordinated merchandising, is Wyler & Co., Chicago, a leading producer of dehydrated soup mixes and related items.

The Wyler business literally grew from a bouillon cube. Now, in addition to the Chicago plant, it operates three plants in Europe. Silvain S. Wyler, founder of the company, began importing bouillon cubes from Europe in 1932 and selling them in the U. S. As the business expanded, other "wife-saving" products were added, including cold-drink bases, packaged soup mixes and several types of dehydrated vegetable flakes and powders used in cooking. To handle this growing line, the company established its own manufacturing facilities.

Today the sizable family of Wyler products—all of which represent an attempt to give the consumer a tasty food preparation in compact, easily prepared form—requires a variety of packaging materials ranging from foil and cellophane bags to folding display boxes, tin and glass containers and steel shipping drums with polyethylene liners, which are used in shipping soup-base materials to the company's plants abroad. In each instance, packaging materials have been carefully selected to meet specific product requirements. Design treatment, meanwhile, has been kept up to date and unified to maintain definite family relationship among the various products.

During World War II, military food requirements gave impetus to the science of dehydration and a number of companies entered the field. Although many of them expected to win an important place in the postwar consumer market, the expected boom in dehydrated foods failed to materialize. Only a relatively small number of firms, which were able to develop quality items with sufficient consumer appeal, succeeded in establishing themselves in the postwar period. The record of the Wyler organization in

CONSUMER FAVOR is quickly accorded to brightly printed aluminum-foil envelopes, heat sealed and providing eye appeal and lasting shelf protection for Wyler dehydrated soups. Instructions and cross reference to other Wyler products appear on the back of the packages. Folding cartons were adopted as being the most suitable for self-service merchandising.

producing and merchandising this new type of food emphasizes the key role played by proper packaging.

Vegetable-soup mixes were one of the earliest products successfully sold in the U. S. in dehydrated form. Wyler's first entry in the field reached the market before the war—in 1938. Originally this product was packed in a transparent cellophane bag with a separate inner label; later the label was printed directly on the cellophane. This package, with some design changes, continues to be used today, in a duplex construction for adequate product protection.

First of the Wyler family of packaged chicken soups was chicken noodle soup, originally packed in glass re-use tumblers with a vacuum-seal cap. At different times decorated as well as plain tumblers were used for this purpose to encourage the housewife to collect them. About 1941 the glass package was supplemented by heat-sealed aluminum-foil envelopes, sold from counter display cartons holding a dozen packages. These early foil packages were cellophane lined; later a laminated type of construction was adopted.

The sealed foil envelopes quickly found favor with consumers and soon became the principal package used for the retail trade, although glass as well as tin continues to be used for institutional packs. During the period 1942–43, as chain stores and supermarts began to stock the Wyler line of soups, the need for other packaging changes became apparent. The 12-package carton, although excellent for independent stores, was not suitable for self-service merchandising. Wyler's answer to this problem was individual folding cartons with a die-cut front window, containing either two or three of the foil envelopes. These clearly labeled unit packages increased sales, displayed effectively and required a minimum of home storage space.

The folding cartons are used for the entire family of chicken soups—chicken noodle, chicken rice and cream of chicken—as well as for the new packaged onion soup, introduced in 1949. Occasionally Wyler uses the three-pack units as a "get-acquainted" offer. One such unit, in a limited 1-cent-sale carton, offered three packages of onion soup for the price of two, plus 1 cent. The 12-package display cartons are still used to some extent for independent stores. When

LOWER PRICE RANGE is opened up by 5-cent envelopes of unsweetened Kold Kup in six flavors, introduced in 1949 to supplement original Kold Kup soft-drink preparation with sugar added, using cellophane packets for counter display. The envelopes are printed on laminated stock.

the company successfully incorporated actual pieces of dehydrated chicken meat in the soups, beginning in 1949, the foil envelopes and cartons were redesigned to highlight this important new sales feature.

The laminated envelopes consist of an outer layer of 0.0004 aluminum foil, rotogravure printed in four colors, mounted to a glassine liner, then a 0.0008 aluminum-foil ply having a heat-seal coating. This combination of materials provides positive protection against water-vapor penetration, insuring a shelf life of from six months to a year or more. The opaque aluminum-foil package also excludes light, preventing an objectionable darkening of the soup ingredients. In addition, the unfilled foil packages require relatively little plant storage space and are ideally suited for high-speed automatic or semi-automatic packaging lines. Their light weight means reduced shipping costs and they are not subject to breakage in transit and handling.

The attractively designed packages effectively utilize the sparkle of the aluminum foil for added merchandising impact. Light blue, buff and dark bronze are employed for front-panel backgrounds, with the natural foil color used for a frame or border. These are used in combination with other colors—such as red, white and yellow on onion soup—which immediately identify the different flavors on the retail store counter. All follow the same general design treatment.

On the reverse side the packages carry preparation and serving suggestions, along with brief "sell" copy. This information, printed in two boxes, is accompanied by small line drawings symbolizing ease of preparation and is followed by short promotional copy relating to the other Wyler soup mixes. All back panels are printed against a light background, with the natural foil as the border.

All the foil-packed soups are filled and closed on a series of packaging lines in the Wyler plant. Operators hold the open end of the foil envelopes against the spouts of double-hopper units which fill the dry ingredients and the paste-like soup base, then place the bags upright on conveyor lines. Then the bags pass through the heat-sealing units, where the tops are automatically sealed. Workers at an assembly table just beyond the heat sealers set up the folding window cartons, place the foil envelopes in them and pack the boxes into corrugated shipping containers, which are conveyed to storage areas.

One of the earliest products brought out by the company was Kold Kup, a beverage mix. In its original form, this product is made complete with

ADDITIONAL PRODUCTS emphasize Wyler's close attention to functional packaging and clear-cut family identity with script logotype as identifying feature. Bouillon cubes come in jars with safety seal or in five-cube cartons. Dehydrated vegetable flakes are in composite canisters with friction lids. Onion and garlic powders have pierced inner seals to serve as shaker tops. New private-mold bottle is shown at left. Soup greens are packed in duplex cellophane bags with product illustrations. Typical packs for institutional use are shown in the background.

sugar, requiring only the addition of water. It is packaged in a printed cellophane envelope whose basic design has been retained, with slight modifications, through the years. This design features an illustration of the sun sipping Kold Kup through a straw and the notation, "Fully sweetened with pure sugar." In 1949 a streamlined 5-cent version of the product, without sugar, was introduced. The new product is packed in brightly lithographed envelopes of wax-laminated stock, with a close family resemblance to the cellophane bags used for sweetened Kold Kup. Both packages are color keyed to the flavors and sold from counter display cartons.

One of Wyler's newest packages is the duplex cellophane bag for soup greens, adopted in 1949. This package contains $^{7}/_{8}$ oz. of assorted dehydrated vegetables. Printed in red, white and green, the package illustrates the vegetables within. On the reverse side are use instructions. Folding counter cartons hold 12 packages.

Bouillon cubes, the original product on which the company was based, continue to be sold in tree varieties—chicken, vegetable and beef. Individual cubes are automatically wrapped in aluminum foil mounted on waxed paper, providing lasting flavor protection. The foil is used in red, gold and green to distinguish the three varieties, all three colors carrying a continuous embossing of the Wyler name. In one popular type of retail package, five cubes are overwrapped in cellophane and placed in a printed folding carton, packed one dozen to a patented style of paperboard counter display carton which slopes backward for maximum display effectiveness. The cubes are also sold in units of 15 to a screw-capped glass jar with paper label. One of the latest innovations in these packages is the use of an inner safety seal which covers the mouth of the jar beneath the cap, affording additional product protection and discouraging pilferage in the retail store. The seals are held securely to the jar top by an adhesive applied before the metal cap is screwed on.

Also important in the Wyler line, and again making prominent use of the script Wyler logotype, are a group of dehydrated flakes and powders used in cooking—parsley flakes, celery flakes, pepper flakes, onion flakes, mixed vegetable flakes and mint leaves. All are packed in composite metal-fibre canisters with easily removable friction tops. Closely related to this assortment are pure onion powder and garlic powder, supplied in small glass bottles with metal screw caps and a pierced aluminum inner seal which provides a dispensing action. Like the safety seals mentioned above, these perforated disks are held on the lip of the container by adhesive. Both products are sold from folding counter-display cartons holding a dozen bottles of the product.

The Wyler line is not confined to retail products. Several varieties of Wyler soup mixes are also packed for institutional use in glass containers with screw-type lithographed lids, while metal containers are also employed for some of the larger sizes. The Wyler institutional labels have recently been redesigned to afford improved legibility and carry out the family design theme. Some of the company's institutional packs are made under private brands, using labels which are so designed that the proper brand designation requires only a simple slug change.

CREDITS: *Design program, Norbert F. Schwarz, Chicago. Packaged soups—aluminum-foil bags, Reynolds Metals Co., Louisville, Ky.; folding cartons, American Coating Mills, Div. of Owens-Illinois Glass Co., Toledo, Ohio. Kold Kup—envelopes for unsweetened variety made by American Paper Goods Co., Chicago, and printed by Schenker Co., Chicago; display cartons, Morris Paper Mills, Chicago. Soup greens—cellophane bags, Crystal Tube Corp., Chicago; display cartons, Morris Paper Mills. Bouillon cubes—embossed foil wraps for individual cubes, Johnston Foil Mfg. Co., St. Louis, Mo., and H. D. Catty Corp., Chicago; five-cube folding cartons, American Coating Mills; counter display unit for 10 packages, Milprint, Inc., Milwaukee; jar for 15 cubes, Hazel-Atlas Glass Co., Wheeling, W. Va.; screw caps and safety seals, Ferdinand Gutmann & Co., Brooklyn; labels, Shuman Labels, Chicago. Vegetable flakes and leaves—fibre cans, American Can Co., New York; labels, The Packaging Division, The E. F. Schmidt Co., Milwaukee. Garlic and onion powder—stock bottles, Anchor Hocking Glass Corp., Lancaster, Ohio; special-mold bottles, Hazel-Atlas; labels, Shuman Labels; sifting seals and metal closures, Ferdinand Gutmann; display cartons, American Coating Mills. Institutional packages—jars, Hazel-Atlas; cans, Continental Can Co., New York; closures, General Cap & Closure Division, Chicago; labels, Shuman Labels. Volumetric fillers on foil line, Paul L. Karstrom Co., Chicago. Heat sealers, Doughboy Industries, New Richmond, Wis.*

Packaging Institute - 12th Annual Forum

Hotel Commodore, New York - October 23-25, 1950

A promising program lived up to its promise Oct. 23–25 at New York's Commodore Hotel in what was generally considered the best-planned, best-conducted Forum in the 12-year history of this annual Packaging Institute event.

A year ago there was a feeling that the Institute was still floundering, still failing to grasp its opportunities for leadership in the production and technical aspects of packaging. But this year it was apparent that it had been only a question of time before the rebuilding program launched two years ago by President Charles L. Barr, Executive Director L. V. Burton and General Chairman of Technical Committees Robert de S. Couch could make itself felt.

The program dealt at length with the vital questions of material supply and Government controls—but it stuck to an intelligent appraisal of facts and never swerved into scare-mongering. There was a well-conducted session on "Packaging and Rearmament." There were sessions of wide, general, practical interest on such subjects as "Reproduction and Package Printing" and "High-Speed Packaging." There were two strictly technical sessions—perhaps the first that the Institute has ever conducted on a truly professional plane—presenting eight important papers. And for those with special interests there were meetings of the petroleum-products and pharmaceutical groups and of committees working on various projects.

The membership responded with the highest attendance ever recorded at a Forum—just one short of 800. This compares with 677 last year (including the separate pre-packagers' meeting); 508 in 1948 and something less than 450 in 1947. And in his valedictory address as president, after serving the limit of two terms, President Barr was able to report that actual membership of the Institute has risen substantially in the last year, to a total of 362—including 301 company and 61 individual memberships.

If there is any secret in this rebirth of the Institute it probably lies in the success that the leadership has had in, first, straightening out a complicated organizational set-up and, second, attracting a broad representation of the package-using field to active participation in Institute work. The fine work of the Program Committee, headed by E. H. Balkema, is typical.

Mr. Balkema of the Colgate-Palmolive-Peet Co. was rewarded by election to the board of directors. Others named by acclamation, to board vacancies were Charles O. Kendall of E. R. Squibb & Sons (re-elected), Horace C. Baker of the Hudson-Sharp Machine Co., Walter E. Daley of the New Haven Pulp & Board Co., Roger V. Wilson of the Research Dept. of Continental Can Co. and T. A. Torrence of the Aluminum Co. of America. Mr. Barr, as retiring president, becomes an ex officio board member for the next two years.

The new board of directors promptly elevated Mr. Kendall, who had been a vice president, to the presidency to succeed Mr. Barr. Flanking him as vice presidents will be Mr. Couch, who relinquished his key post as general chairman of the overall Technical Operations Committee after three years, and Henry W. Stevens, re-elected. The next forum has been tentatively set for October, 1951, at the same place.

One of the accomplishments of the conference was the organization of a new Package Printing Committee, with Mr. Balkema named as permanent chairman. Other meetings were held by committees on paper, films and foils, glass containers, shipping containers, parenteral closures, foods, packaging education and petroleum.

More than 270 attended the annual banquet, which was reinstated after a lapse of one year. Interest of technical men was reflected in capacity attendance of 241 at the Technical Committees luncheon on Wednesday, at which F. S. Leinbach of the Riegel Paper Co. was introduced as the new general chairman of Technical Committees and Retiring Chairman Bob Couch was given a resounding ovation.

The general membership luncheon on Monday drew a crowd of 273 to hear Roy F. Segur, in charge of Containers and Package Planning for the National Security Resources Board, discuss "Containers in a Semi-War Economy."

Mr. Segur stressed that re-armament will go on regardless of the outcome of the Korean war "or any other similar relatively minor wars or incidents."

This "semi-war period" means, he said: (1) an increase in military expenditures from 13 to 30 billion dollars a year and (2) a reduction in the labor force by induction into the Armed Services of about 1,000,000 men in the younger and more-productive age groups.

"Making allowance," said Mr. Segur, "for foreign orders and the effect of the draft in 1940 and 1941, I do not think that the material and manpower requirements of today's war preparations are much larger than in the period immediately preceding World War II. The difference is that today's requirements are being superimposed on an economy which was already hard pushed to meet civilian demands, whereas there was considerable slack in the early '40s.

"To a very substantial degree, our increased national production has been due to a substantial increase in population and to a substantial increase in the income of the average wage earner. In other words, there is every indication that the prosperity of the country has reached a new high plateau and that our present level of production and not that of the war years or of any other period must be regarded as the benchmark from which to measure future plans.

"In varying degrees, various segments of industry appear to have reached their peak production in the last year or so and there have been some indications that some slight recession from the peaks might reasonably be expected. At least there were indications that very few things were still hard to get.

"At this juncture the Korean war started and, as a result, the President asked for and obtained from the Congress a substantial increase in appropriations for military expenses and a substantial increase in the number of men in the Armed Forces with, of course, increased taxes and various measures for economic controls as they might become necessary.

"However," said Mr. Segur, "only a very small percentage of the armament expenditures have yet been felt in the form of actual orders for raw materials and other products.

"Despite this fact, it would appear that virtually everything is in short supply. I do not know a single producer of any product to whom I have spoken in recent months who, at least until the Korean war took a turn for the better, did not have more orders than he could fill and who could not use more raw

materials than he can get. However, I know very few producers who haven't been getting approximately the same amount of materials as they had been getting in the recent past"—excluding the relatively few who have been affected by strikes and other more or less temporary special conditions.

The apparent shortages of recent months, Mr. Segur concluded, have not really been due to increased military requirements, but have apparently been due to increased civilian demands which have been inspired by the threat of possible future shortages. So far, he said, the principal effect of our military appropriations has been to spur civilian buying.

"Furthermore, leaving aside for the moment the possibility of an all-out war and, therefore, an all-out mobilization of manpower and industry, it does not seem likely that military armament in a semi-war economy is going to take more than a moderate percentage of our total output. . . .

"It seems likely that unless conditions change drastically, the military requirements to be met from the productive facilities of the country will not exceed 15% of capacity. It would seem that the packaging industry, as well as all other industries, will continue to enjoy a high level of activity and that for the most part this activity will be due to civilian rather than military demands."

Stressing his hope for a minimum of Government controls, Mr. Segur stated it as his sincere belief that, except during a period of extreme shortage, industry in general and the packaging industry in particular is far better equipped to service customers and divide available supplies than is any Government agency, no matter how well staffed and advised. He pledged his continued effort to see that controls are limited to those absolutely necessary in meeting specific problems.

Following is a summary of Forum proceedings:

MONDAY MORNING

President's Address—**Opportunities and Obligations**—CHARLES L. BARR, *retiring president of the Packaging Institute and executive vice president, F. B. Redington Co., Chicago.* The year in the life of the Packaging Institute that ends with this 12th Annual Forum has been most active and, I am satisfied, most productive of useful results.

Among other activities, the Technical Committee activity has been greatly expanded. The entire Technical Committee plan was re-organized during 1948 under the leadership of Robert Couch. (The organization plan of these committees was shown on large diagrams and is reproduced herewith.)

I hope what I have to say about the ability and imagination demonstrated by these Technical Committees during the two and a half years of Mr. Couch's leadership will be understood by you to be a profound tribute, not only to the full committee personnel, but also to the ability and industry that Mr. Couch has brought to the furtherance of this committee work. I might also add, parenthetically, that Fritz Leinbach of the Riegel Paper Co. is taking over the general chairmanship of the Technical Committees, succeeding Mr. Couch, and Mr. Leinbach's acceptance of this responsibility is a guarantee that the extraordinary progress made during Mr. Couch's incumbency will be continued.

During the past year the Paper Committee has concluded the examination of all known testing procedures for paper. This examination has resulted in the adoption of 31 testing procedures that meet the needs of members of the Packaging Institute. These 31 testing procedures were the work originally of the Technical Assn. of the Pulp and Paper Industry, commonly known as TAPPI. With the cooperation and agreement of TAPPI, these 31 testing procedures have been published as Packaging Institute Testing Procedures with, of course, proper credit being extended to TAPPI.

As the work of the Paper Committee continues, we expect that there will be several more testing procedures published. These will be original with the Packaging Institute, rather than adopted from the work of other organizations. If you think that these 31 testing procedures do not represent work that is of value to our members, I cite to you that well over 2,000 copies of them have been sold at 25 cents per copy by the Packaging Institute since they were published by us.

The Petroleum Packaging Committee under the leadership of R. Chester Reed of the Texas Co. was organized last April. We have received plenty of evidence that the work that the Petroleum Packaging Committee has accomplished up to now has been of much value to the petroleum industry. One real tribute to the work of the committee has been the acceptance of their conclusions by the American Petroleum Institute and the National Lubricating and Grease Institute.

Grown to be an important phase of the Institute's activity, Mr. Barr pointed out, is the Advisory Service, which is directed toward finding collective solutions of packaging problems that are general to some particular branch of industry. This type of service to members attained its present form in January, 1949. Since that time 34 Advisory Service reports have been issued.

One particular study made by the Advisory Service method is reserved for comment. I refer to Advisory Service Report No. 285, the purpose of which was to establish a ratio between total direct labor and packaging labor. As a result of this survey, we are practically forced to the conclusion that as far as consumer-goods industries are concerned, their principal business is packaging—not the production of the material to be packaged.

To summarize, the packaging of foods averages 60% of the total direct labor hours; the packaging of toiletries and cosmetics averages 83%; the automatic packaging of drugs and pharmaceuticals averages 88%.

Certain lessons come out of these figures:

1. Automatic packaging is not quite as automatic as the term would imply. There is still a lot of labor consumed in these operations that may in time be eliminated.

2. The development of packaging machinery is not as far advanced from the labor-hour viewpoint as the development of processing equipment.

3. The packaging function in industry is a bigger job than the processing function. Any department of a company as complex as packaging, requiring the coordination of a multitude of subfunctions from artwork and advertising, to research, to package development, to purchasing, to equipment, to production, to distribution and sales, would seem to be deserving of a functional head or management of packaging. Very few companies yet recognize this need.

In years gone by at these Forums we have heard of the large wastes of packaging dollars through the lack of coordination of the various factors that enter into packaging. The figures just cited show how great is the opportunity for cost reduction. Any such opportunity soon becomes an obligation—an obligation to employ improved packaging materials, improved equipment and better management of the packaging function.

Seminar—**Outlook for Packaging Supplies**—*Chairman*, LEE R. FORKER, *Quaker State Oil Refining Corp.* Mr. Forker observed that steel containers, including cans, used over 8% of all steel consumption in the first half of 1950. Demand for steel for cans was up 14% over the first half of 1949, with beer use up 20% and motor oil up 35%. Major sources are on an allocation basis, although military demand as yet has not been a great factor. Although tinplate is behind mill shipping schedules, there are some optimistic factors. In the last half of the year there is a seasonal drop in demand for food cans. Two new tinplate mills will be constructed and others expanded. Restrictions on end use of cans are not expected so long as the military can obtain its requirements.

Textile-bag inventories were caught short on a sudden upsurge of demand in the third quarter and conditions at the moment are chaotic. A sellers' market prevails and buyers are accepting almost any offer, regardless of construction or

price. Because of political instability in India and Pakistan, burlap supply for the rest of this year is a real nightmare. However, reports on this year's jute crop, plus the carryover from last season, indicate a supply—provided it can get through trade channels and provided scare buying subsides—that should be adequate. Cotton, at a 30-year peak in price, is under export control and this year's crop is reported below the five-year average; therefore the supply of cotton bags is limited at a time of large demand.

Supply and price of wood containers in the early part of 1950 was seriously affected by the huge demand for lumber for building. This year's food crop, however, was well supplied with wood containers. Currently, lumber is declining in price and no present shortages are reported either for box lumber or for shooks and crates. A steel-hoop shortage may limit barrel supplies. Nails are scarce. It is the general opinion, however, that after the first of the year supply will be adequate for a decreased demand for wood containers.

WILLIAM F. CULLOM, *New York* (on plastic films and cellophane): With business at an all-time high, military requirements are at present taking not more than 5% of film supply. Excessive, growing demand for civilian uses accounts for the present shortage, which has all films on allocation from suppliers. Imports have been insignificant.

There will not be enough film, Mr. Cullom said—despite the building of new facilities—to meet *present* demand until late 1951 or early 1952. And by that time there is no telling how much further demand may have risen. The typical user is now consuming anywhere from 100 to 1,000% more film than in 1946, while production of film in the same time has been expanded only 100%. By the end of the present suppliers' expansion program in 1952, however, supply should be 400% above the 1946 level.

As the only means to cope with the shortage at present, Mr. Cullom suggested "downgrading" of packages temporarily—eliminating film from items well-established sales-wise, which could get along with it and devoting it to a few items in need of a sales push—and greater efficiency in packaging to cut down overlaps in wraps. Efficiency of wrapping machines also should be checked, he said, to cut down on spoiled packages and re-wraps.

GEORGE W. VON HOFE, *New Jersey Machine Co., Hoboken*

PACKAGING INSTITUTE ORGANIZATION

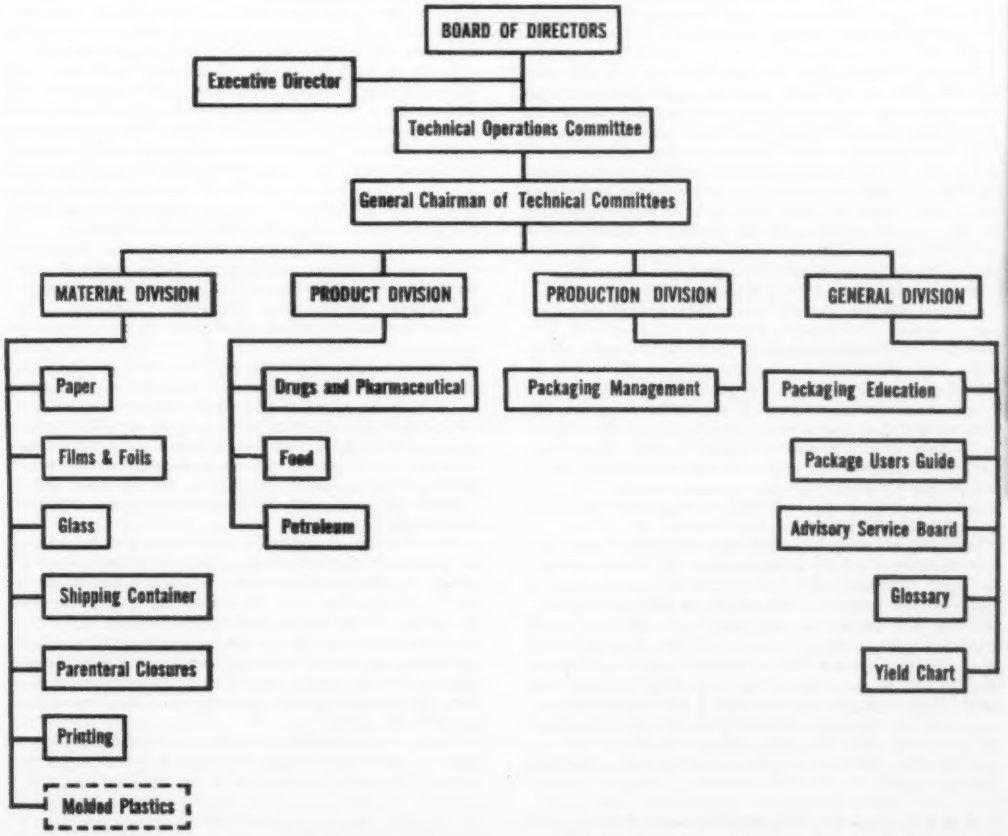


CHART of the revised Packaging Institute committee organization was displayed at the Forum meeting. The Molded Plastics committee enclosed by a dotted line (lower left) is a proposed committee and one which has not yet been activated.

(on machinery): It is perfectly evident that as the defense program expands, packaging machinery will become more difficult to get, particularly those machines designed for a specific purpose. The Munitions Board has recognized this problem and has classified certain packaging-machinery manufacturers as Class II industries. This means that the normal product of these manufacturers is basic in nature or is a potential bottleneck to wartime output of material and that their capacity cannot be fully counted on to produce defense orders. This will insure a supply of at least a certain number of machines as, if and when some materials-allocation program is worked out to see that such companies get the necessary materials to produce the machinery so classified.

Users of machines can assist in maintaining a supply of machines by anticipating their requirements. Many machines of standard type are available today on reasonably short deliveries. It would be very good insurance for those companies who will find it difficult to get a priority under emergency conditions to check over their equipment now and replace their older and worn machines with new equipment before things get too tight. Any equipment now installed will make the load that much lighter under emergency conditions.

A program of preventative maintenance is a must under present conditions. A good maintenance program with an ample supply of parts on hand will be very cheap insurance against the day when a production line is shut down for the want of a repair part. All machinery manufacturers are in reasonably good condition to supply repair parts now. There is no telling how soon this will change.

PHILIP I. HEUISLER, JR., *Maryland Glass Co.* (on glass containers): Due to the many uncertain conditions confronting the industry at the present time, it is extremely difficult to give a clear, concise picture. In 1940, total glass production was 54 million gross with a total productive capacity of 79 million gross. For the year 1950, it is estimated that the glass-container industry production will be 100 million gross with an estimated capacity of 140 million. Thus, we had a cushion of 25% in 1940 against estimated productive capacity and a cushion of 42% in 1950 against estimated capacity. However, the conditions are considerably different.

To begin with, as of June 12 of this year, Solvey Process Co., the largest producer of soda ash in the chemical field, went out on strike. This situation was further aggravated on July 24 when the Diamond Alkali Co. went out on strike. Two companies representing approximately 60% of the total soda-ash production went on strike in June and July. As of July 1, inventories of wholesalers and retailers in the drug, chemical, cosmetic and allied lines were at a very low point. The impetus to business which followed the opening of the Korean war, plus the tremendous loss of glass-container production during this period, has placed the glass-container industry in a most serious situation. It is very doubtful if shipments will become normal before Jan. 1 of next year.

However, the Glass Container Mfrs. Institute officials feel that Washington will not at present issue any restrictive orders in regard to design and as to the manufacture of molds for bottles of new design. If you remember, during the last war we were not allowed to manufacture any molds for designs that were not in existence prior to the date that the orders were issued. Also, the War Production Board restricted all food packers to the economy-line type of jars to enable the glass-container industry to produce the greatest amount of grossage out of the material available. I do not believe that such action will be taken by Washington prior to March 1 of next year, by which time glass containers should be back on a normal delivery basis.

L. B. KEPLINGER, *Steel Shipping Container Institute* (on steel containers): In 1940 the steel-drum industry had a capacity of from 20 to 25 million heavy steel drums on a one-shift operation basis. By 1943 this had been stepped up only to 27½ million. Today the capacity is 45 to 50 million drums annually, so there is no reason to fear a shortage of supply capacity in this field. The only question is the amount of steel that will be allocated to this use.

Figures through July show that the drum industry has stepped up production 10 to 25% over the rate prevailing in the first half, but it is important to note that military orders are just beginning to make themselves felt. The four big users of steel drums normally are the petroleum, chemical, food, and paint and varnish industries.

Mr. Keplinger spoke of the research program sponsored by his Institute at the Battelle Memorial Institute to develop new and better drum linings. This has resulted in a practical means of spraying dispersions of polyethylene. The Steel Shipping Container Institute in this connection has formed a separate corporation for the sole purpose, he said, of protecting the patents and licensing rights to the process at nominal fees. He denied rumors that his Institute intends to go into business with this process to compete in any way with established manufacturers of drums and liners.

DR. L. T. STEVENSON, *American Paper & Pulp Assn.* (on paper and paperboard): Statistically speaking, there is no shortage of pulp, paper and board now, but try to tell that to a man who is trying to place orders for some of these products! Paper is being produced at an annual rate that will show an increase in production of 3 million tons in 1950 over 1949. This is practically a 16% increase in one year. All of the data that I can gather indicate that ultimate consumption has not increased to the same extent. So why the shortage?

To begin with, inventories of pulpwood and wood pulp were at a low level in July of 1950. Both commodities had suffered drops in price during the second quarter of 1949, when a number of forecasters felt that we were in for a "real postwar shake-out," and a low-inventory policy was maintained for the balance of that year. With the advancing commodity price level since January of 1950, the desire to rebuild inventories ran into a series of strikes at pulp and chemical mills that prevented rebuilding the depleted pulp inventories.

That was the situation when the Korean war startled the country into a fantastic buying spree. At paper mills the order backlogs jumped 64% from June to August, while production and shipments were of record proportions. Capacity has been strained and yet inventories of raw materials have been maintained.

Capacity operation of paper and board mills requires 15¼ million tons of wood pulp annually. Domestic pulp production has been at the record annual rate of 14½ million tons annually. Imports have been at an annual rate of 2,400,000 tons, which would make a total annual supply of 16,900,000 tons available for this market. If a consumption of 750,000 tons is allowed for non-paper consumption, the net result will be a 16,000,000 ton over-all pulp consumption, against 16,900,000 tons supply.

How much paper and board is to be required for the military program? In 1944 when we were actively prosecuting a global war the amount required for *direct Government use* and by *defense plants* was 5.6% of our total paper and board production. Probably the consumption for both direct Government and defense plants will be less than 2% of present production now, under "cold-war" conditions, although paperboard will carry a much higher load. Over-all the problem does not present a serious challenge to civilian consumption of paper and board.

I fully believe that when present scare or inflationary buying eases we will find that paper is in such abundant supply that there will be paper "running out of our ears."

MONDAY AFTERNOON

General Session—**Packaging and Rearmament**—*Chairman*, HERBERT T. HOLBROOK, *Standard Cap & Seal Corp.* Commenting

on the apparent subsidence of large-scale fighting on the Korean front, Mr. Holbrook in his introductory remarks pointed out that demand for packaging will continue unabated as long as the nation remains on a military footing, since only a small part of material is expended on the battlefield. The major portion of it goes for ordinary supply of military installations, in war or peace. Of current military appropriations, he estimated that $1 to $2 billion will go for packaging and packaging supplies. Requirements are now more severe than during World War II, anticipating storage for five to 10 years or longer and temperature extremes from minus 65 to 160 deg. above. There will also be increased packaging for air shipment. Mr. Holbrook pointed out to the speakers the importance of the audience, representing 60 to 70% of the food industry, 80 to 90% of the drug industry and from 90 to 100% of the petroleum industry.

Can We Expect Government Allocation of Packaging Materials?—CHARLES A. LEWIS, *U. S. Department of Commerce.* About all I can honestly do at this time is to review very briefly some of the case histories of container controls during the WPB under circumstances similar to those existing today; what the facts are as of this moment with reference to container requirements, production and supply, and what steps the National Production Authority has already taken.

Our task requires diversion of certain materials and facilities from civilian use to military and related purposes. It requires expansion of productive facilities beyond the levels needed to meet the civilian demand.

We already have Priority Regulation No. 1, Inventory Control, the main purpose of which is to prevent the accumulation of excessive inventories of materials in short supply, and Priority Regulation No. 2, outlining the basic rules of the priorities system and "DO" ratings. Although we all realize Priority Regulation No. 2 may only be a "stop-gap" measure, we also realize it is about as simple and fair an order as could be written at this time.

What comes after NPA Reg. 2? What allocation, conservation or limitation orders and regulations can be expected on packaging materials and containers? All I can say at this time is that, *when necessary*, separate orders can and will be established setting up control systems for both basic raw materials and end products such as containers. On the basis of the present tight supply situation in some primary raw materials, it would not be too much of a surprise if some further regulatory or allocation measures were forthcoming in the not-too-distant future. Order M-1 on steel, M-2 on rubber and M-3 on columbium-bearing steel are the first steps.

One of the first steps industry can take to forestall container controls is to effect savings in containers and the basic raw materials from which they are manufactured through voluntary action. For example, to save paper and corrugated cartons, packers can go back to some of the old tables we had establishing the number of units per case which represent the minimum number which should be packed in a given carton. Do all you can within your own company to execute the following proposals, similar to proposals made at the beginning of the last emergency:

(1) *Do not overpackage.* Re-inspect the design of your fibreboard shipping containers and try to redesign them to use less board. Enlist the cooperation of your supplier in this.

(2) *Use the largest container practical.* The glass-bottle maker can make quarts about as fast as pints. The fibre-box maker can manufacture boxes to carry a far greater tonnage out of the amount of fibreboard available to him if your contribution could be, for instance, to pack 48s instead of 24s, or 24s in place of 12s.

(3) *Get maximum re-use from your containers.* Through special "spot," "strip" or tape sealing, fibreboard containers can be closed sufficiently well to carry, yet be opened without so damaging the box that it cannot be collapsed, returned and re-used.

(4) *Proper salvage.* Many fibre boxes are going overseas into areas where salvage obviously is impossible. Kraft waste is needed and needed badly. When you have had the maximum possible use from your fibre containers as containers, be sure that those containers are segregated with other *brown* paper and bags and find their way to a waste-paper dealer as waste kraft.

(5) *Do not order more containers than your immediate, minimum requirements.* To do so may adversely affect the entire container program and *please* do not require a delivery date far ahead of the time of intended actual use. Voluntary action by manufacturers and users of containers and packaging materials can re-distribute stocks to stretch the present available supplies.

I think I can safely state that the basic policy we had on containers during the last emergency may again be adhered to under the National Production Authority. That basic policy was simply to provide a container for every product which required one—to the extent it was possible to do so—determined by the availability of raw materials and the sufficiency of productive capacity. The factors influencing this policy are as follows, in order of their importance: First, to provide all the containers necessary to meet our defense needs. Second, to supply all the containers necessary for the stabilization of the civilian economy. Third, to furnish containers for all other products to the extent that it will be possible to do so on the basis of equity.

Organizing to Handle the Military Packaging Problem—COL. R. A. HOWARD, JR., *Chief of Procurement Methods, Munitions Board, Washington, D. C.* Col. Howard, who spoke extemporaneously, explained the Munitions Board packaging set-up, the function of which, he said, is to establish policies and to act as coordinator among the military departments. It is the board's intention, he said, to set up a simplified procedure for coordination of specifications.

A handy rule-of-thumb, Col. Howard indicated, to determine packaging's load in military programs, is to figure that 6% of the cost of material, on the average, goes for packaging. On this basis, military packaging this year will cost about $1 billion. The Munitions Board, he said, is seeking substantial savings in the supply system through avoidance of waste. Continued study, he believes, will achieve higher standards.

The Status of Military Packaging Specifications—CLINTON K. ROYCE, *vice chairman of the Navy Packaging Board, Office of Naval Material, Washington, D. C.* The military packaging-specifications situation, Mr. Royce conceded in a frank, off-the-cuff discussion, is completely out of hand, as a result of eight to 10 years of "growing pains" in the Armed Services.

In general, there are two types of specifications—material and use. There are also two classes of specifications—construction and performance. Tracing the nine different stages or branches of specifications development, Mr. Royce pointed out that there are Federal specifications designed originally after the last war for routine procurement for Government agencies. The first of the military specifications along lines now being followed were those developed by Army Ordnance during World War II. Then came the A-N (Army-Navy) specifications for the air arm. In 1944 the JAN (Joint Army-Navy) series began. In 1945 the Army-Navy boards also issued JPI specifications; these are now on the way out. In 1947 the National Security Act created a National Military Establishment, resulting in some specifications designated as NME.

Now the combined packaging organization under the Department of Defense and the Munitions Board is attempting to simplify things by converting everything to "MIL" (Military) designations. Some of this series have already been issued. The system is to use the prefix MIL plus a letter which is the first letter of the generic name of the item covered plus specific numbers. A hypothetical example would be "MIL-B-141"—for a barrier specification in a certain category indicated by the

number 141. The intention is to keep the numerals used in previous specifications to aid identification by industry.

The outlook, Mr. Royce said, is for standardization on four different categories of specifications and instructions affecting packaging: (1) Federal specifications, covering more than one Government agency other than military arms, (2) a large number of MIL specifications, covering hundreds of thousands of military procurement items, (3) standards specifications under MIL and (4) probably a group of instructions or manuals for packaging and preparation for packaging of specific items.

Mr. Royce stressed that all specifications, in the present formative stage, are open to suggestion and amendment, and comments from the packaging field will be welcomed. In response to numerous inquiries received, he stated that it was impossible to set up a mailing list for specifications, but suggested that the best contact on the subject would be the Government inspector in each plant, who will have an index of all specifications and can procure them.

TUESDAY MORNING

Reproduction and Package Printing—Chairman, E. H. Balkema, *Colgate-Palmolive-Peet Co.*

Give Suppliers the Dope—Marshall G. Baldwin, *Colgate-Palmolive-Peet Co., Jersey City, N. J.* Producers of papers, inks, plates and other materials used in the making of finished paper packaging materials have the right to expect correct artwork and complete information which will permit them to produce the desired finished product, Mr. Baldwin stated. The printer must be given complete instructions and the only way to pass the needed instructions along to the suppliers is in writing. Instructions must be complete in every detail and must include every test that will be performed on the packaging materials at the time they are received. Acceptance or rejection of the packaging materials should be based on this same information.

Artwork. To secure adequate artwork, we have found it necessary to prepare and issue specifications which the artist must use in preparing the artwork.

Engravings. When only one printer is to produce an item, we release the artwork to him for making engravings and plates. When many printers are required to produce the same item, we buy the original engravings and pattern plates and furnish each supplier with a set of pattern plates.

Purchasing specifications. We furnish our suppliers with written specifications prepared by our Package Engineering Department. In writing these purchase specifications, it is important to determine, first, what is desired of each item of packaging materials in terms of the product packed in it. Mr. Baldwin reviewed a typical purchasing specification for Super Suds, which gave (1) symbol or identifying number, (2) specification number, (3) specification number which is superseded, (4) title or name of item, (5) drawing number for artwork, (6) drawing number for mechanical drawing or blueprint, (7) size, (8) stock specifications, (9) colors, (10) style or type of packaging materials, (11) grain direction of stock, (12) identification marking to appear on the printed packaging materials, (13) how to pre-break scorelines, (14) how to set perforating score rules, (15) tests which must be passed and Laboratory Standard Practice Instruction numbers for test procedures, (16) reason for the latest change, (17) how to pack the cartons for delivery.

Mechanical drawings. Mechanical drawings are part of the purchasing specifications and are kept up to date at all times.

Standard color charts. Specifications usually state that the printed item is to be "As per approved color sample." We have standard color charts on the cover of which appear the name of the packaging material and its symbol numbers, who approved it, date of approval, date of superseded issue and date of basic G. E. spectrophotometric curve.

Standard practice instructions. These show the method of conducting the test and how to report results.

Purchase order. This shows name and address of supplier, delivery point, delivery schedule, terms, how to ship, quantity, symbol number, item name, specification number and price.

Plate and Cylinder Making—Jack Lomax, *Quality Control, Reilly Electrotype Co., Inc.* I'm here to talk about trouble and how to correct it, said Mr. Lomax. A great deal depends on plate edges, color values and preventing muddiness from over inking. A careful checking department can prevent many mistakes and from observation learns to tell in advance what is good. The checking department learns to look for the shadow dots to determine that everything is in order. They also check the black plate carefully and check the plates with the progressives. Mr. Lomax discussed the efficiency of vinyl plastic plates and told how by the use of such plates *Life* magazine has been able to cut production time so that it can come out today on Thursday instead of Friday.

Ink Making—George Welp, *International Printing Ink Division, Interchemical Corp., New York.* The raw-material situation has become more critical every day. And, because paper and boxboard characteristics will be changed also, we will have to adjust ink formulations, Mr. Welp explained.

The multiplicity of new printing surfaces made necessary new printing techniques and printing-ink formulations. Plastic sheeting, metal foils, plastic-coated papers, plasticized cellophane, etc., offer new printing problems. Inks have been developed for printing by the usual processes on most of these surfaces.

The right time to select printing inks is when the package is still in the dummy stage. Many designers now check color schemes before submitting designs to the client. When the requirements are known to the ink maker, formulations are developed to meet specifications.

In setting up standards and uniformity controls for color in package printing, the use of automatic precision measuring devices is essential. The General Electric recording spectrophotometer automatically analyses colors according to dominant wave length and brightness. The third dimension, purity, can be calculated from these two. Such three-dimensional specifications do not require a sample of the color and are, therefore, permanent with no possibility of deterioration.

There is one missing link in the chain of color control for packages. This is a means of quickly checking in the pressroom against spectrophotometric standards. Several machines for this purpose have been developed. One by Interchemical Corp. has been given extensive tests in commercial application. This differential colorimeter in the pressroom gives a quick check on the wet sheet against the already-established standard. Thus it is not necessary to wait until the sheet is dry to check against already-established controls. Reports of tests with this machine have been very favorable.

It is also essential to establish accurate color standards for paper stock or board. With stock and ink standards established, it is possible to determine whether the color is off standard and whether it is caused by the ink or the board or paper stock.

One of today's greatest problems in package printing is on polyethylene. No completely satisfactory direct method has been developed, except for short-life jobs. However, a new method of printing on Anilox presses has been developed employing an Anilox anchor coating upon which special Anilox inks are then printed and results seem to be highly satisfactory.

As far as we can see, there will be no shortages of printing inks, but we are running into difficulties chiefly because of an unprecedented demand. Whether this is due to warehousing, hoarding, fear of price rises or scare buying, we don't know. There is a great demand for the raw materials to make printing inks—producing shortages, high prices and even black markets. Raw-materials suppliers have been forced to set up voluntary rationing. Manufacturers of all pigments have been

handicapped by long strikes in plants producing alkalies essential to their production. Estimates claim soda-ash production is down 60%. The strikes are being settled, but their effects will be felt for some time.

We are reasonably sure that we shall be able to meet all demands—large and small. During World War II no package printer suffered unduly because of lack of printing inks. We intend to keep up that record.

Making and Printing of Paper and Board Stock—WALTER E. SOOY, *The Gardner Board & Carton Co., Middletown, Ohio.* Mr. Sooy gave a brief description of the cylinder paperboard machine and the Fourdrinier paper machine, and their uses.

Equipment for machine coating of paper is designed to be an integral part of the paper-making operation. Machine coating has gained in popularity in the last 10 years until today only a small percentage of paper or board is coated by the old brush-type method.

Mr. Sooy stressed the importance of pressroom operations and pointed out that the quality of work turned out in this department depends to a great extent on the original engraving.

Over $10,000,000 worth of printing equipment was set up and in operation at the recent Graphic Arts Exposition in Chicago. One press that attracted considerable attention was a web-fed five-color offset press equipped with rotary cut-off knife and pile delivery. The manufacturer guarantees it to cut the web into sheets for printing register with a tolerance of $^{1}/_{64}$ in. plus or minus.

We are all interested in turning out a good product, and those in the operating end are also interested in top machine perfomance for both labels and cartons. To accomplish the best results, proper specifications must be plainly set forth.

One of the most important points to consider in quality control is proper specifications and these specifications are not proper if they do not recognize certain variables. One of the best tools that has been developed to aid in quality control is statistical quality control based on scientific sampling and, depending upon the operation, determination of the frequency of sampling. It is important that proper statistics, together with control charts, be used for raw materials and the various steps in the manufacturing process. The specifications or standards set up must take into consideration both the lower and upper tolerances.

It is also essential that we recognize that there will be a variation in almost every step of the manufacturing processes. For this reason, these variations should be plotted on a range chart, and before the range chart can be designed, it is necessary to make a study of the normal variation of the operation to determine what is good performance.

We know that it would not be practical to inspect each individual carton in a large order. Therefore, we have to determine the frequency of sampling.

If we attach to an order specifications with proper tolerances that can be met, skilled workmen will tackle the job with a determination to meet the standards. If we set up standards that we know cannot be met, the chances are that workmen will not even try to meet them. Mr. Sooy presented an actual production chart used in statistical quality control as it applies to a portion of the paperboard-machine operation. The chart was designed to show the operating variations in caliper, weight and per cent of moisture.

Statistical quality control is now being used by such industries as aircraft, chemicals, foundries, power plants and many others. Mr. Sooy said he felt certain that in the near future it will have an important place in the paper and printing industries.

Container Quality From the Purchasing Viewpoint—EDGAR E. RUMPLE, *Merck & Co., Inc., Rahway, N. J.* As manager of container purchases, Mr. Rumple explained, his first responsibility is to procure requirements in accordance with established specifications and quality standards. In all companies that are quality conscious, incoming materials are subject to inspection prior to acceptance. Our inspection and sampling procedure is patterned after the Navy's "General Specifications for Inspection of Material—Appendix X" dated April 1, 1946, copies of which may be procured from the U. S. Government Printing Office in Washington.

When material has failed to pass inspection, we send the purchasing department a written notice of rejection giving all the facts—the exact nature of the defect, incidence of defect, quantity of the shipment, scope of sampling and samples illustrating the defect. In rejecting the defective material, the purchasing agent is the policeman who enforces the laws of the specifications and thus puts teeth in quality control.

Quality control is a relatively new industrial science. It is flexible and should be molded and fitted to ever-changing products and methods of purchasing them. Do not, therefore, permit your quality-control programs to become "set." Mr. Rumple suggested that any such program include long-term detailed records of inspections which can be used in establishing performance standards and justifying tolerance limits above which rejection is made.

Too often disregarded is an adequate recognition of commercial variations and trade practices. The purchasing agent must make it his business to see that specifications furnished to him are so worded that they allow for commercial variations and that suppliers accept them without reservation.

My advice to those having such problems is to bring in the purchasing agent and supplier and have a three-cornered discussion. No quality-control program can be effective which does not include the supplier. Another suggestion is to arrange for your quality inspectors to visit suppliers' plants so they will understand manufacturing processes and problems connected therewith.

Mr. Rumple did not believe that the war effort so far, or in the immediate future, is of sufficient magnitude to make degrading necessary for some time to come. Raw-material shortages have admittedly developed to an alarming degree, but he believed they are of short duration, stemming from scare buying.

TUESDAY AFTERNOON—*(Technical Session)*

Chairman, KENNETH R. MARVIN, *Eastman Kodak Co.*

Adhesives in Food Packaging—DR. L. E. SIMERL, *Marathon Corp.* The problems of obtaining adhesives for highly specialized products in an expanding field were discussed by Dr. Simerl. New products require more stringent specifications in food-package manufacture and very close cooperation with adhesive suppliers. One successful approach started with assignment of a special group, for adhesive work only, with the manufacturing engineering staff, supplemented by the facilities of the research and quality-control laboratories when necessary. The technical men of the food-packaging manufacturer work directly with the technical men of the adhesive companies, with complete frankness on both sides. A complete listing of all the problems involved is prepared. Adhesive manufacturers have access to the actual machinery, are given adequate samples and are encouraged to suggest such machine changes as seem necessary.

On any given new product, the supplier is invited to submit an adhesive for trial. The adhesive is first fully evaluated in the laboratory. The criterion of any adhesive is fibre pull, where paper is involved, although other requirements include freedom from toxicity and odor, limited setting time, behavior on commercial gluing equipment, mileage and finally cost. Testing of the bond produced includes long-term storage tests at accelerated conditions, ranging from zero F. to 100 deg. F. with 90% relative humidity and 100 deg. F. with 20% relative humidity.

Once the candidate adhesive has passed the laboratory stage, it is usually evaluated on an experimental gluer. This is a

variable-speed machine designed and built in our own shop, which can also apply films such as acetate and cellophane to board surfaces.

The final stage of testing is a series of runs on commercial equipment. If successful, a complete product specification is written and a copy sent to the adhesive supplier for concurrence. This includes data and tolerances on solids, solvent, viscosity, freedom from taste, odor and toxicity, bond strength and stability, and includes packaging and shipping instructions. This system has been very successful in operation and it is believed that the adhesive companies favor it.

Electronics in Packaging—ROGER L. MERRILL and WILLIAM HECOX, *Battelle Memorial Institute.* The automatic control of packaging processes is one of the largest fields of application of electronic techniques in the packaging industry. In general, two types of control situations are encountered: those where continuous control information is available and those where only incremental control information is available.

Controls using continuous information have been widely applied in packaging. However, control by the use of incremental information has been accomplished in the past only by statistical techniques. Electronic devices are now being developed which will provide automatic statistical control of product quality. Such devices have already been applied to the control of package weights.

Some of the causes of package-weight variations fluctuate rapidly. These short-period or pure-chance causes are inherent in the process and can be corrected only by a major change in design of the process.

Statistical control charts for averages ($\bar{x}$) provide the means for detecting long-period trends in weight variations, which can often be corrected by a corresponding adjustment to the filling machine. Control charts for ranges (R) provide the means for detecting changes in the inherent variability of a process. Electronic devices have been developed which perform these functions automatically and can be used to adjust automatically the filling machines.

The first essential of an electronic statistical-control system is a high-speed measuring instrument. The "Selectrol" automatic electronic check-weigher weighs each package on a conveyor and produces an electrical signal proportional to the deviation of the package weight from normal. An electronic computer converts these weight signals into two electrical signals, one proportional to the average weight and the other to the weight range of a sample of consecutive packages. A correction-indicating device compares these signals to the pre-established control limits.

When the average weight is above or below the control limits, corresponding visual and audible indicators are operated. In addition, a signal is transmitted to a suitable servomechanism which automatically adjusts the filling machine. When the weight range is beyond the control limits, warning indicators are operated.

Scuff Resistance—R. D. HEAD, JR., *International Printing Ink Division, Interchemical Corp.* There is no set standard for rub resistance in inks; there is no definite test which would automatically classify an ink as rub resistant. What is adequate rub resistance in one case would be unsatisfactory to the next customer.

Let us look at some of these variables. The first great consideration is the product itself. Naturally, the ink must be formulated so that neither the ink nor the product will deteriorate or be destroyed by their close proximity. In ink parlance, we call this "product resistance."

The next thing to consider is the surface to be printed. In this classification, board and paper stock are, of course, the foremost materials. We know that if the stock is absorbent and porous, no matter how glossy and rub resistant the ink is made, the blotter-like qualities of the stock will more than undo the rub-resistant tests in the laboratory.

The inkmaker must think of rub resistance not only at the initial stage (when the ink is dry), but maintenance of this property through periods of comparatively rough treatments such as cutting, creasing and forming the package; shipping, filling and packaging the cartons and, finally, transporting the package in containers to the consumer.

Gloss inks for cartons and labels which are relatively rub resistant can be made, but in multicolor work they must be printed simultaneously or, at the least, in a very short period of time—roughly two to three hours later.

In formulating a rub-resistant ink, we employ a good drying vehicle, the necessary pigments, a drier and a lubricant. The lubricant is generally of the wax type such as paraffin wax, carnauba wax and others. The value of such a wax is very great and in all ink films which have good rub-resistant properties, this type of lubricant is found. However, heat tends to reduce the non-rub qualities when it causes the wax to migrate.

We are continually searching for better lubricants which will increase surface slippage. Harder resins and the higher-melting-point lubricants are two factors which will improve the rub-resistant properties of an ink on the package.

A testing device has been developed by the IPI laboratories, but it can be used only as a relative measure. The wide divergence of specifications readily point this out. The first step is for you to establish a standard for your own individual package problem and thereafter succeeding batches of ink can be tested against the standard specification.

The National Printing Ink Research Institute is trying to devise an instrument that will enable you to measure, with reproducible results, the rub resistance of a given surface. This effort, we believe, will be successful and when it is complete, it will be submitted to inkmakers, boxmakers and packagers for joint criticism and approval.

Testing for Impact Fatigue—ROBERT DE S. COUCH, *Central Research Laboratories, General Foods Corp.* (Mr. Couch described a simple instrument developed in his laboratory using flat samples of paper, in quality-control testing, to predict strength performance of finished bags. His paper is printed in full in the Technical Section of this issue of MODERN PACKAGING, starting on p. 131.)

TUESDAY—(*All-Day Concurrent Session*)

PETROLEUM PRODUCTS PACKAGING—*Chairman,* R. CHESTER REED, *secretary of the Packaging Committee, The Texas Co., New York.*

Organization and Objectives of the Petroleum Committee—MR. REED. The Petroleum Packaging Committee of the Packaging Institute has been organized to study the packaging problems of the petroleum industry. Membership on this committee is open to all members of the petroleum industry who are engaged in the packaging of petroleum products.

The Lubrication Committee of the American Petroleum Institute and the National Lubricating Grease Institute have endorsed the proposed activities of the Petroleum Packaging Committee of the Packaging Institute. A subcommittee of the API and NLGI will be set up to receive from the Petroleum Packaging Committee reports of their findings and recommendations.

If recommendations for standardization of packages result, they will be referred to the American Standards Assn., which will follow through and issue the standards, if such can be established.

The Petroleum Packaging Committte is now working on metal drums and pails, oil cans and grease cans. We hope to have quick action on motor-oil cans.

Mechanical Handling of Small Packages—F. N. LANDON, *Sun Oil Co., Philadelphia.* The automatic pallet loader bridges

one more gap toward the ultimate goal of a completely mechanized packaging line. A simple engineering cost analysis based on our experience can help determine whether or not this machine can be economically justified.

Formula for annual cost of loader operation: Annual cost = SAC (1.5 r + E) + D + I, where S is the No. of shifts per day (units); A, the number of days operation per year (units); C, the average carton-production rate divided by 20 (av. unit speed for Sunoco); r, the hourly first-class mechanic's rate (dollars–include overhead); E, the cost of 10 electrical h.p. per shift (dollars); D, the annual depreciation of installation (dollars) and I, the annual insurance cost (dollars).

Formula for annual cost of manual operations: 60 SWARM/2,000 H = annual manual handling cost. The new factors are: W, the weight of a single carton (pounds); R, laborer's daily rate (dollars–include overhead); M, maximum cartons per minute produced (units); H, average tons handled per man-hour (units).

If you subtract from your present cost of operation the cost of operation of a pallet loader completely installed, a saving or loss will be shown. Or, curves can be plotted, with *costs* and *packages produced* as coordinates. On a one-shift operation, savings of $8,100 per year have been reported possible, making, approximately, a 32% return on a $25,000 investment for a pallet loader.

Standardization for Palletizing—C. L. LOCKHART, *Shell Oil Co., New York.* The subject of pallet standardization is today premature. "Why palletize?" is more to the point. A question yet to be answered is "What is an ideal unit pack?" In this connection, the first need is a catalogue of objectives and, the second, a development committee that will research various field techniques and recommend specific plans. At present materials handling has a catalogue of *don't's* that is much bigger than the catalogue of *do's*, with the result that a big backlog of unsolved problems has arisen.

For example, operations with pallets reveal limitations as to freight cost, lack of proper destination equipment for unloading, excessive number of pallets required if unit load is left on pallet at destination until consumed, protection against exposure to weather, etc. Use of expendable pallets, automatic palletizing, unit loading methods, etc., also create unsolved problems as far as optimum potential handling results are concerned. As a result, there is no standard for palletization. Rather, there are thousands of standards. Actually what must be sought is a palletless pallet or an expendable mobile deck to provide ready access for mechanical handling of unit loads to and from storage and through transportation to end use at a cost of approximately 25 cents each.

Economics of Labeling, Stenciling and Marking— (Seminar) **Labels**—G. E. STEEVER, *Atlantic Refining Co., Philadelphia.* Mr. Steever described the Atlantic Refining Co.'s extensive labeling program, which covers most of their small-package line. Packages that are big movers are carried fully lithographed, but all others are carried in blank design and labeled as required. Advantages derived with labels are: (1) smaller inventory of empty packages; (2) greater flexibility because empty packages can be rebranded from one grade to another; (3) easy rebranding from one stock to another in cases where products go under two different brand names; (4) uniformity in package design and appearance; (5) availability of label supplies on short notice for emergencies.

Due to the large number of packages used in small quantities per grade, Atlantic labels are applied by hand. Satisfactory application results only when labels are wiped free of air bubbles. This is done by rolling the label onto the can. Adhesives should be waterproof and possess the property of good adherence to metal. Any good vinyl-resin-base adhesive should be satisfactory.

Labeling costs compare favorably with decal costs, but are slightly more costly than stamping or stenciling methods. However, the quality packages obtained, as well as the advantages mentioned above, tend to offset this difference in cost.

Decalcomanias—R. B. MORSE, *Morse Decals, Inc., Los Angeles.* Mr. Morse presented the address prepared by EDWARD THOMAS, *Shell Chemical Corp., San Francisco.* The Shell Chemical Corp. has had successful experience with decals for containers used in packaging a long list of chemical intermediates and solvents. Many of these are toxic, flammable or otherwise hazardous. Precautionary labels that stand up are essential. The use of a decal made by the silk-screen machine process was proposed. This method offered great advantages in body and color retention. The composition of this process differs from the lithographed decal in that the silk-screen-type paints are highly pigmented to prevent fading and they are used with newly developed synthetic materials with an alkyd-resin base that are also weatherproof. In the manufacture of the silk-screen-process decal, a final coating is added to protect the colors; it has proved resistant to abrasion and the elements.

Although paper labels are definitely cheaper than decals, the difference in cost has proved valuable to assure adequate precautionary markings.

Stencils—FRANK G. MARSHALL, *The Texas Co., New York.* Stencils are made in one of three ways:

1. They are cut by machine in oilboard. The size for the most popular machines varies from $^{7}/_{32}$-in. to $1^{3}/_{4}$-in. letters and the maximum width of the stencil varies from 5 to 11 in., depending on the size of the letters.

2. They are cut or punched by hand in either oilboard or metal. This method frequently leaves metal stencils wavy. Hand dies are available, generally, for letters varying from $^{1}/_{4}$ to 2 in. Soft brass must be used, not heavier than 30-gauge in die punching $^{1}/_{4}$- and $^{2}/_{3}$-in. letters.

3. They are cut by pantograph in metal from hand-made patterns three times the size of the finished stencil. The larger pattern eliminates wavy lines. Twenty-four-gauge brass of the hard engraving type is most satisfactory. With careful handling, the serviceable life of the stencil is almost unlimited.

No hard and fast rules determine the economics of stenciling versus labeling or the application of decalcomanias unless the economic study is directly related to one particular problem under one set of operating conditions. When the study is so restricted, the accountants know the rules.

It is best to examine thoroughly any alternate method that might provide satisfactory performance.

Export Shipping—PAUL H. PAULSEN, *Wm. H. McGee & Co., New York.* Like the packager, the insurance companies have an interest in the protection afforded by the package for products in export. One important factor that makes problems for the packager and the underwriter is the variation in port facilities and the wide range of conditions to be met. A recent 15,000-mile tour of major South American ports showed conditions ranging from excellent to poor. In some instances mechanical equipment is lacking or in poor condition, making for extremely rough handling, double handling and long delays. In some ports large units must be placed in open storage. Pilferage is a problem.

One good way for packagers to overcome some of the problems in export is to improve packaging through standardization. Proper packing and uniform practice is just as important in the export field as quality of product and salesmanship. Eliminate cost competition in packing. Leave it to production, where it belongs.

Streamlining Petroleum Packaging—A. D. MURPHY, *Esso Standard Oil Co., New York.* The problem facing Esso involved a standardization of physical aspects of designing, colors and brand identification for every type of product the company sells. Economic factors of the project were enormous.

Prior to re-organization, the program was haphazard with

many odd sizes, color combinations and shapes resulting. To bring this situation under control, a package advisory committee was formed composed of members who can speak with authority. The committee was backed from the beginning by top-level support, which is certainly a *must* for any reorganization program of this type.

The committee was confronted with the problem of well over 100 types, sizes and color combinations of packages. These were reduced to two basic color schemes. First, a red, white and blue combination for all products marketed through company outlets and affiliates; second, chocolate and chamois combination for products shipped to jobbers and other commercial customers.

Probably the most difficult step was elimination of different sizes and shapes of containers. Cooperation of the marketing group made solution of this problem possible. Marketers felt that economies to be realized warranted rather drastic action. After much study, six standard container sizes were adopted. For liquid petroleum products, 1-qt. and 5-qt. food type, 2-gal. rectangular, 5-gal. lug-covered pail with stiff spout, so-called 15-gal. drum and 55-gal. drums. For greases, containers adopted were 8-oz. tubes, 1-lb. and 10-lb. cans, 35-lb. lug-covered pails, 100-lb. kegs and 400-lb. drums (full-removable head). These containers have been the basic line for the past five years and are doing the job that 14 did before.

This new standardization means a large saving in warehouse inventory and space, eliminating the stocking of many specialized types of containers.

The specialty line, of course, is necessary, but has been controlled to an absolute minimum of sizes and shapes. Family design has been followed throughout. The main consideration has been to utilize commercially produced units.

Uniformity in package procedure provides greater flexibility in shipping and filling operations in the packaging plants, helps reduce warehouse inventory, reduces the amount of money in inventories of containers and package supplies, permits the handling of spot orders more quickly. Despite warnings issued against abandonment of certain common sizes, actual surveys of sales in specific instances revealed no losses and some important gains.

Packaging for the National Military Establishment—CLINTON K. ROYCE, *Office of Naval Material, Washington, D. C.* Preparedness problems have increased the need for complete, integrated coordination between industry and the military establishment. Industry standards that can be converted by the military into appropriate specifications can play a vital part in effecting needed coordination. The Petroleum Packaging Committee of the Packaging Institute should speed and shape its standardization program with a view to making its findings available to the Munitions Board. These standards may very well become military standards.

Lack of adequate specifications has resulted in considerable confusion both for industry and the Services. This has been especially true in regard to the marking of containers. There is in preparation a military specification guide for marking containers. It has high priority.

In order that the country's preparedness program succeed, management should (1) comply with Government specifications and (2) get word down to the worker so that he can know how to meet specifications.

WEDNESDAY MORNING *(Concurrent Session)*

SEMINAR ON HIGH-SPEED PACKAGING—*Chairman,* JOHN A. WARREN, *Engineering Department, American Home Products Co., Jersey City, N. J.* The production line is the battlefront where all theories and proposals for packaging-line improvement must succeed or fail. The increased demands now being made for higher speeds make a seminar of the type presented here immensely practical.

Glass Lines—J. KENNETH DOTTS, *Director of Finished Goods, Joseph E. Seagram & Sons, Louisville, Ky.* The best ingredients and packaging materials are required if glass lines are to run at high speeds, because all specifications have a bearing on how well mechanized lines will operate. Seagram considers this matter so vital to production that a material-supplies department has been set up to control specifications of all incoming supplies, which must be approved by the department before they can be released for production. There can be no doubt that this increases efficiency.

For a number of years there has been a trend to mechanize whiskey-packaging lines and increase speed. In this connection it seems best to have the machine manufacturer develop machinery to meet the packager's needs, rather than for packagers to do the development work.

This approach sometimes fails and then the packagers may be justified in carrying on their own development work, as Seagram did in developing a successful multiple method for applying neck trims and medallions. This work was done after various manufacturers had turned down the project as impractical.

Seagram's lines now handle 120 bottles a minute. Experiments are under way, however, to develop a close-coupled line that will handle 150 bottles a minute.

Quality improvement has been as important as high-speed production in seeking increased mechanization. Quality improvement, for example, was one of the main objectives in developing automatic strip-stamp machines, since automatic operations produce neater, more uniform stamp application.

Cost control, of course, is an important factor where high-speed production is concerned. Seagram controls cost on a daily basis. Teletype reports are received from each plant regarding efficiencey and speed. A production ratio based on cases-per-hour-per-man is reported. Thus each plant's true cost picture can be analysed effectively.

High-Speed Packaging—W. P. SCHOMMER, *General Mills, Inc., Minneapolis, Minn.* Most important in planning a high-speed line is to purchase the best equipment available to do the particular job. Another important phase of high-speed packaging is proper layout of equipment. Production losses and increased costs are accelerated by poor layouts. A well-organized packaging department is needed to operate and control a high-speed packaging set-up.

A very competent packaging-department superintendent should head up the department. Under his direction should come a packaging foreman who is responsible for all phases of the operation on his particular shift; also, an inspector whose prime function it is to check the quality of the package as it moves from unit to unit and to report any abnormal conditions to the foreman. Machine operators play a most important role in the success or failure of the operations. Employees assigned to operate high-speed packaging equipment should be put through a very thorough training period.

To get and maintain maximum production from high-speed equipment it is imperative that it be kept in A-1 shape at all times. This type of equipment is intricate. Poor adjustment and worn parts which affect timing will cause reduction in performance. Therefore, it is of prime importance that a well-manned and efficient maintenance department be set up.

In a high-speed operation where lines are running upwards of 60 per minute, adhesives play a major part in answering the question, "How much production can be obtained from this line?" When large quantities of adhesive are used, tank storage with a piping system to each unit in a line is advisable.

The control of atmospheric conditions during periods of high heat and humidity present many advantages from an operating standpoint.

Mr. Schommer outlined the mechanics of the testing and sampling packaging materials, as carried out in his company's quality control program.

On many occasions one will find that the average output

is considerably less than the speed at which the line is running. Recently our industrial-engineering section made a study covering productive utilization. Detailed analysis of data revealed that 204 minutes of down time daily resulted in a loss of production of 12,240 packages per day based on a production speed of 60 packages per minute. The 204 minutes of time is equivalent to 3 3/8 hrs. per day, per line, in unscheduled down time.

The lost time due to waiting, relief, clean-up, etc., accounted for 59.3% of the unscheduled down time. Their elimination would step up the average rate from 60 to 69 or 70 per min. Closer supervision and better planning will go a long way to reduce this percentage.

The lost time due to equipment accounted for almost 41% of the total down time. The 41% requires improved mechanical know-how in keeping the packaging line units in proper adjustment.

An analysis of this type will bring out the weak points in any high-speed packaging operation and assist in setting up corrective measures.

Squeeze-Bottle Lines—G. D. HARRISON, *The Mennen Co., Newark, N. J.* From the beginning, squeeze-bottle packaging production has been a matter of getting the "bugs" out of the set-up. Since our experience had been with filling glassware, our first approach to the filling of a polyethylene bottle was to use vacuum also. This was not too successful. Unless carefully applied and limited in amount, vacuumizing collapses the bottle. Straight-line fillers of the type in use could be babied along, but were not the units for trouble-free production, and careful inspection of the resulting liquid level in the bottle had to be made to assure that the proper amount was being packaged. This inspection is not a simple job. A fluorescent light behind the line gave a sufficiently good shadow to spot the level. Weight filled was further checked by checkscaling.

In attempting to solve the filling problem, bottles with heavier walls might have been tried, but this was not acceptable to the sales department. Chilling the bottles was tried. The bottles collapsed just as easily when cool as when warm.

Shrouding the outside of the bottle and applying a vacuum to the outside as well as the inside was tried. This did not prove practical. Many changes had to be made, such as adjusting the lift of the machine, making a suitable enclosure between the shroud and the base plate and constructing the shroud suitably to maintain its shape without fail to make a good seal. Lining up of the nozzle through the small neck opening in the bottle was extremely difficult.

From results with these attempts at vacuum filling, it was concluded that a different approach must be taken. Gravity and piston-type fillers, therefore, were considered. It was probably fortunate that we first tried the piston type. We had available a Colton #4PF, used in the past for filling collapsible tubes. Basically, this unit measures the volume of a product in a piston and discharges it into the container. With the adaption of a filling spout to fit the opening in the bottle, a satisfactory filling arrangement was made. The only important limitations were smearing of the product on the inner surface of the neck and low output. The converted filler turned out about 15 packages a minute. This was about 1/3 of needed output.

In thinking of new machinery, it was decided that such equipment should be usable for other types of filling, too. This was precautionary, just in case the consumer field might dry up, though it was apparent that polyethylene was here to stay. Finally, a Vari-Visco machine, manufactured by the Karl Kiefer Co., was purchased. The machine was guaranteed to handle 90 packages a minute, but the manufacturer frankly made no claim as to minimum wetting of the inside of the neck during the operation of lowering and raising the nozzle through the 11/32-in. opening.

This machine is working satisfactorily. At present it operates at a speed of 50 bottles a minute. This speed balances the line well at the moment. Speed could be increased. The product is delivered to a filling head through a pump uniformly and constant. The product is pumped through ports in the head of the machine to the container. The nozzle fills the container from the bottom up. The nozzle is ahead of the liquid level and, thereby, is kept clean. No claim can be made that the operation is a high-speed filling operation, but it offers improvement in speed, accuracy and cleanliness.

Closures being used are of two types. First, the spray type, including a tube assembled to the spray head and a ball-shaped top; second, just a plug with small opening and a ball-shaped top. Assembling and placement of parts is done by hand. Current investigations hold promise that some of this work can be done by machine. The ball-type closure resists machine sorting. Different design might answer the problem, but there is the question of eye and sales appeal, as well as the need for molds for special-design caps.

Once polyethylene bottles are filled and closed, the handling from there on is relatively easy, since there is no need to worry about breakage and loss of product.

Tin-Can Lines—GEORGE WALDRON, *F. & M. Schaefer Brewing Co., Brooklyn.* In 1933, approximately 30 millions of barrels of beer were sold in this country—24 of which were dispensed as bulk sales. Six million barrels were sold in packages. Just 17 years later those over-all figures are reversed. In 1950, approximately 85 million barrels will be sold. More than 70%, upwards of 60 million barrels, will have been sold in packages. The increase in packaged-beer sales has been tenfold.

These statistics indicate the tremendous burden shouldered by the packaging industry to handle the upswing. The trend of modern consumer-buying habits was responsible for the change and the brewing industry, because of Prohibition, wasn't prepared. One of the can companies, however, in 1931 had anticipated the trend. The problem in canning beer is to produce a container that will hold it. The can must withstand 90-lb. pressure p.s.i., because packaged beer is pasteurized with a temperature raised to approximately 140 deg. F. The can problem was eventually solved and the first canned beer was sold in Richmond, Va., in January, 1935. By 1937, popularity was assured. Since then canned-beer sales have jumped 480%, while in this time bottle-beer sales have increased only 150%.

Beer packaging has represented a tremendous production problem. When canned beer was introduced, the rate was 140–150 cans per minute. Today many breweries operate machines turning out 300 or more cans per minute. By next year machines with a 500–600 capacity per minute should be in operation. Most breweries have continuous flat-type pasteurizers and if there are any weak or defective cans the pressures developed soon reveal these weaknesses in leaks, large or small. The loss may be detected by a weighing machine that automatically discards the leaker. Rejects are very low, fewer than 1%. Beer, of course, is highly dependent on its package, since nothing is flatter than flat beer.

Two types of beer cans used are the flat top and the cone or crown top. The flat top is the more popular with the industry, is faster running and cubic-space displacement is less.

Proper machinery design is important to avoid bottlenecks. Design should be for maximum rather than the minimum. Production costs are lower, as are maintenance costs, and the extra capital investment in larger units is soon amortized.

WEDNESDAY MORNING (Technical Session)

Chairman, DR. L. E. SIMERL, *Marathon Corp.*

A Rapid Graphical Method for Measuring Moisture Equilibria—ARTHUR H. LANDROCK AND BERNARD E. PROCTOR, *Dept. of Food Technology, Massachusetts Institute of Technology.* (The paper, read by Mr. Landrock, described a new method

and apparatus employing sulphuric acid in suitable concentrations to control relative humidity of the test atmosphere. It will appear in full in an early issue of MODERN PACKAGING.)

Method of Measuring Organic Vapor (Odor) Transmission Through Packaging Films—T. J. MULDOON, ROBERT DE S. COUCH and H. M. BARNES, *Central Research Laboratories, General Foods Corp.* (The paper, read by Mr. Muldoon, will be printed in full in an early issue of MODERN PACKAGING.)

Method for Measuring Gas Tightness of Grown Closures—H. E. BROCKETT, *Continental Can Co.* A method and apparatus have been devised to collect and measure the volume of the gas leakage from crowned bottles over a liquid to determine the relative sealing efficiencies of the crown closures. The method has several advantages over the conventional pressure testing methods, particularly in time savings and accuracy, because the leakage is measured directly. Pressure testing gives an indirect measurement of the gas leakage, requires considerable time and destroys the samples so that each examination represents different bottles and crowns which may vary widely in their performance.

The apparatus consists essentially of a gas-collection tube which is sealed over the top of a crowned bottle. The crowned bottles with the collection tubes sealed on are stored under the desired conditions and periodic readings are made of the gas volumes in the tubes. The gas leakage can be determined at any desired time intervals and for any total length of storage time, so that rates of leakage as well as total leakage can be determined.

This new method requires the use of a corrected carbonation chart if the results are to be directly compared to the results of pressure testing. The present carbonation charts used by the bottling industry deviate from the actual carbon-dioxide-gas contents, particularly at the higher carbonations and pressures.

Practical Factors in Nitrogen Packaging in Flexible Films—W. S. WALKER, *Chemical Engineer, Linde Air Products Co.* (The paper is printed in full in the Technical Section of this issue of MODERN PACKAGING, starting on p. 136.)

WEDNESDAY AFTERNOON

DRUG AND PHARMACEUTICAL SEMINAR—H. E. NACK, *Sharp & Dohme, presiding (Chairman of Drug and Pharmaceutical Committee).* MR. NACK outlined the aims of the committee toward improving package quality. He said that the committee had met four times during the past year: once in New York, once at the Duraglas Center in Toledo, also in Chicago and Philadelphia. The object is the working out of test procedures not set up by others, but which will be of mutual benefit to the drug and pharmaceutical industry.

Screw-Cap Problems, CARL B. BURNSIDE, *Eli Lily Co.* Mr. Burnside commented on the interest shown in this committee's screw-cap studies undertaken two years ago by the growing number of requests that had been received for the first report released during the past year. He outlined the study in standard tests that is being undertaken on screw caps this year. One section of this further study deals with water-vapor-transmission tests in relation to screw-cap problems from the standpoint of new materials, what they are satisfactory for, establishment of performance index, etc. The other part of the study deals with compatibility tests to determine the suitability of liner materials to product and the effect of products on certain liner materials.

Important Factors in Glass Breakage—C. P. WHITTIER, *Owens-Illinois Glass Co.* The trend in glass manufacture, said Mr. Whittier, is away from the job lot to more and more automatic operation. He mentioned the pioneering of the brewing and food industries, where speeds of handling 300 to 500 bottles an hour is no longer uncommon. All of this provides engineering experience that benefits all industry, he said. Also disappearing are the manual methods of transferring cases to the line. Some firms now purchase reshippers one-tier deep for use with unscrambling devices. Naturally this speed-up factor creates a friction factor and the more friction means less bottles unscrambled. In changing to faster machine operation, he said it should be remembered that the nearer the mechanization can approach the hand operation the happier the results.

Mr. Whittier listed a number of factors to watch in achieving maximum efficiency in mechanized glass packaging, such as the use of guide rails, careful centering of bottles on capping machines, extra care and caution when running private-mold bottles of fancy shape, etc.

Inspection of Incoming Packaging Supplies—F. H. BITHER, JR., *Upjohn Co.* Mr. Bither's report was based on a questionnaire circulated to committee members. Although replies did not indicate too broad interest in the subject, it was evident that members who answered were eager for improved systems of inventory control, proper set-up of specifications for purchasing with respect to quantities, size, construction, texture and other factors.

Export Packaging, DR. JOHN C. BIRD—*Lederle Laboratories.* Although only three out of four firms replied to the questionnaire on export packaging, the points on which most interest was expressed in order of mention were: maintenance of quality, leakage and breakage, importation restrictions, counterfeiting and adulteration, preventing pilferage of small units. Dr. Bird illustrated his talk with slides and recommended highly the Dravo containers for safe export shipments. He also discussed the use of polystyrene foam as an export shipping material.

FRANK MCCOMBER, *Abbott Laboratories,* was asked to come to the platform. He mentioned a report covering $10,000,000 export sales, in which breakage accounted for losses of only 0.08 of 1%. He also said that 99.4% of the goods shipped was reported to have been received in good shape. Such records, he believed, helped to explain the apparent lack of interest in export packaging problems in the drug field.

Shelf Packs—ARTHUR R. SCHETTEL, *E. R. Squibb & Sons.* Questionnaires were sent to 45 concerns in the shelf-pack study. Fourteen replied, sending samples. The types of packs included folding cartons, set-up boxes or bundles. The packs were in 5s and 10s, 6s and 12s, or multiples thereof. Nothing conclusive could probably be deducted from the study, as the number of replies was too small.

Package Style Designed to Facilitate Resale on Prescription in Original Containers—DR. DAVID ASKENAZ, *Wyeth, Inc.* A problem of the drug industry in selling prescription drugs divides itself into two categories: that of selling the drugs in the manufacturer's package under his trade name or with a removable label without revealing the maker's identity, but carrying the druggist's name. A questionnaire on this subject was sent to 80 firms, but was answered by only 12. There is a startling lack of uniformity in practices, said Dr. Askenaz, yet the small percentage of answers may indicate that fewer firms are inclined to prepare special packages. Among the types of labels mentioned were: the spot-glued label, which may be torn off; the soak-off label; the slip-off label, and a lithographic-ink label that may be washed off with alcohol. Also mentioned was the double-slide box, although this was said to be most expensive.

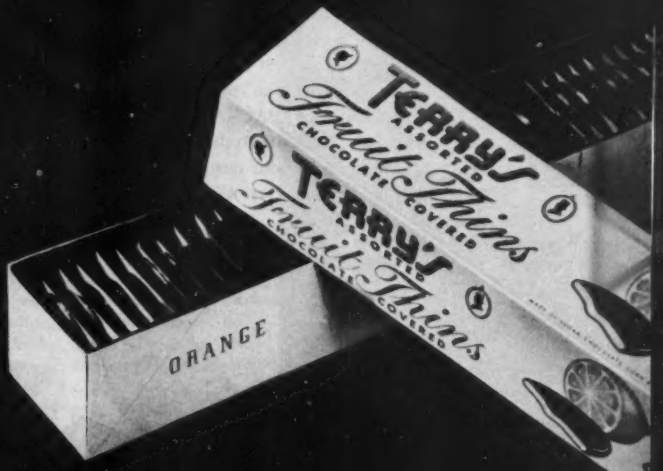
Unusual Foreign Packages—Mr. Nack said this subject would be postponed until the next meeting as too few such packages of sufficient interest had been received.

Following the talks and question-and-answer period, those attending the seminar were privileged to see a large exhibit of current drug packages from leading drug firms, arranged by the committee at the back of the ballroom.

for quality in quantity*

It's Folding Cartons by BURT

*Produced in quantity with a dual purpose . . . to protect the products and to sell them fast. Printed in multicolor by Burt's exclusive offset color process.



Four of the famous chocolate covered thin mints, produced in quantity by The Terry Candy Co.

F. N. Burt Company Inc. • Manufacturers of Small Set-up Boxes, Folding Cartons and Transparent Containers • 500-540 Seneca Street, Buffalo 4, New York • Offices in Principal Cities Or Write Direct • Canadian Division: Dominion Paper Box Co. Ltd., 469-483 King St. W., Toronto, Canada

The leading brands of cigarettes are all wrapped on our machines. Incidentally, the makers of Chesterfields have recently ordered a substantial battery of additional machines.

A "little" thing like this

often makes a BIG difference in SALES!

"Little" things become important when you're after SALES! This is especially true in designing a package.

What, for example, can be quite so annoying as a package with a wrap that is hard to open? . . . We at "PACKAGE" tackled this problem some time ago – and our engineers perfected the easy-opening tape. Now this handy device, in various forms, is being used on a wide variety of machine-wrapped products—cigarettes, chewing gum, crackers, candy, drugs, cleansing tissues, etc.

This is just one example of how completely we aim to make our machines meet the sales requirements of a given product . . . Yours may call for a package that affords utmost visibility, or one that gives extra protection against moisture. Or you may have an odd-shaped product that has never been automatically wrapped before. Whatever your needs, you'll find at "PACKAGE" the experience and ingenuity to supply a machine that will do the job.

Why not get our recommendations for package improvement or ways to lower your costs? Consult our nearest office.

Write for our leaflet "Packages that Sell"

PACKAGE MACHINERY COMPANY • Springfield, Massachusetts

NEW YORK CHICAGO BOSTON CLEVELAND ATLANTA DALLAS
DENVER LOS ANGELES SAN FRANCISCO SEATTLE TORONTO MEXICO, D.F.

Easy-opening devices are among the many improvements pioneered by "PACKAGE"

PACKAGE MACHINERY COMPANY

Over a Half Billion Packages per day are wrapped on our Machines

Impact-fatique test for paper*

NEW INSTRUMENT AND METHOD PROVIDE CONTROL TEST ON FLAT SAMPLES TO PREDICT PERFORMANCE OF FILLED BAGS. By Robert de S. Couch and T. J. Muldoon†

The U. S. Department of Commerce Quarterly Industry Report *Containers and Packaging* tells us that in the first quarter of 1949 over 316,000 tons of paper were produced for the construction of paper bags and shipping sacks. In the first quarter of 1950 the quantity was 337,000 tons of paper. This amounts to slightly more than 8% of all the paper produced in the United States during these periods. It represents a large segment of the productive capacity of the paper industry. The companies which produce paper for bags and shipping sacks undoubtedly are interested in knowing whether the paper which they make produces a satisfactory bag.

Companies purchasing bags for packaging their products also have a vital interest in this subject. If the bag or shipping sack fails to deliver its contents in good condition, the loss amounts to many times the cost of the bag. It is not only a financial loss, but there is the intangible loss of consumer good will.

To help guard against package failure numerous tests are used to measure the qualities of a bag filled with a product. These tests measure the siftproofness, grease resistance, moisture resistance and many other characteristics of the bag. They are good tests and should be used when developing a bag for a product and when establishing the purchasing specifications for the bag.

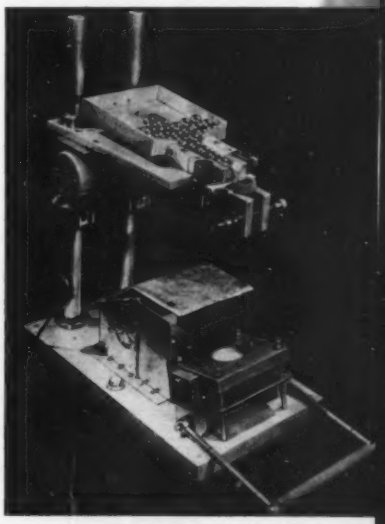
Need for control test

After the correct bag has been selected and production started, it is necessary to determine whether the bags received at the plant meet the performance specifications that have been established. This can be done on a control basis for such properties as moisture resistance, grease resistance and a few others. Unfortunately, it has been impossible to tell whether a bag is strong enough to carry the product without actually filling a number of the bags with the product and submitting them to a drop test. This method cannot be used as a control test. For a control test to be of real value it not only has to be a simple test which will accurately predict performance, but it has to be designed so that it can be used by the supplier as well as the user. A drop test on a filled container cannot be used by a supplier.

The many tests used by the paper industry for measuring strength characteristics are well known. The Mullen, tear, tensile and folding tests, to mention only a few, are valuable to the paper maker because they are simple to run and because they measure one property of the paper at a time.

The difficulty with these tests is that the results show very little agreement with the results of drop tests and field-usage tests. Because of this it is not practical to predict bag performance by any one or any combination of the tests at the present time.

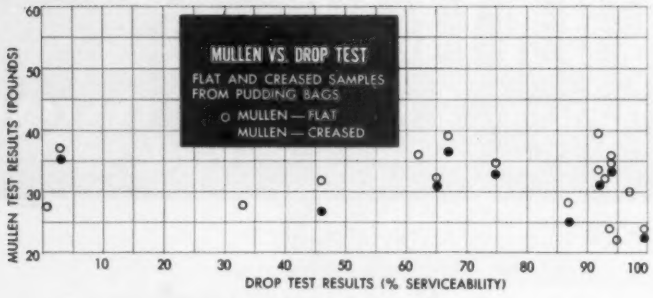
This is illustrated in Fig 2, which is a plot of the results of drop tests and

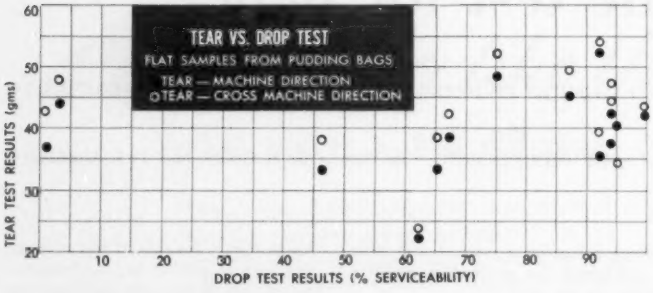


1. INSTRUMENT USED in test. Steel balls drop, at rate of one every two seconds, on sample of paper rigidly held in the clamp at 15-deg. angle. The number of drops required to fracture the paper is noted. A patent is pending on instrument.

* From a paper delivered by Mr. Couch at the 12th Annual Forum of the Packaging Institute, New York, Oct. 24, 1950.

† Head and Associate, respectively, Packaging Research Section, Central Laboratories, General Foods Corp., Hoboken, N. J.





Mullen tests made on the same bags. Each point represents a different bag construction proposed for packaging pudding powders. If the points on this graph were connected, the line would be horizontal. This indicates there is no correlation between the two tests. The graph also illustrates that no correlation exists between the drop test and the Mullen test on creased paper. Fig. 3 is a similar plot of tear-test results versus drop-test results. This figure shows that if there is a correlation between the two tests it is slight and could not be used to predict bag performance.

One reason for the lack of correlation may be that the Mullen and tear tests measure only one characteristic at a time, whereas the paper in a bag receives several types of physical stresses simultaneously or in quick succession in a drop test. It is possible to visualize the paper in a bag receiving, in a single impact, stresses normally measured by the folding, Mullen, tensile, stretch and tear tests. To interpret and interrelate all these tests with bag performance would be difficult. In addition, few paper mills would enjoy being saddled with half a dozen control tests in order to try to predict bag performance.

The drop test previously mentioned is made by subjecting three filled shipping containers, either corrugated boxes or multiwall shipping sacks, to controlled drops from a definite height. The drop cycle is made severe enough to break some of the bags in the shipping container, but not severe enough to break all of them. After the test has been completed the bags are removed from the shipping container and the tears and punctures are measured. Usually the damage is converted, by means of an arbitrary scale, to a per cent-serviceability figure. A 100% rating means the bags are excellent, while a zero-per cent score indicates the bags are worthless.

The results obtained in drop tests on filled bags correlate fairly well with the performance of the bags in the field. It is possible to establish a performance specification based on a drop test and expect the bags that meet this requirement to carry their contents to their destination in satisfactory condition.

TABLE I—IMPACT FATIGUE VS. DROP TEST
(Laboratory machine)

Bag No.	*Bag construction*	*Impact fatigue*	*Drop test at 35 deg. F.*
		Flat	*% Serviceability*
1	Laminated glassine	16.3	75
2	Laminated glassine–kraft	21.3	94
3	Laminated glassine	2.6	0
4	Three-ply laminated glassine	2.3	3
5	Laminated glassine	3.3	33
6	Laminated glassine–kraft	6.3	97
7	Laminated glassine–kraft	18.0	92
8	Laminated glassine	5.0	65
9	Laminated glassine–kraft	17.0	93
10	Laminated glassine	3.7	46
11	Laminated glassine	15.7	100

Fatigue factor

Aside from the fact that bag breakage is caused by a combination of effects, there is a second factor which prevents any real correlation between drop tests and the Mullen and tear tests. This factor is the fatigue in the paper. In the drop test there is a repeated application of force; in the other tests there is only a single application. If the bags were examined after each individual drop in a drop test, few tears or punctures, if any, will be found after the first few impacts. However, the paper has been weakened and as the number of blows is increased the paper will break or tear. No one single application of force causes the damage as it does in the standard paper tests.

It is this same fatigue factor which determines whether a bag, encountering the many small impacts during shipment, will be a success or a failure. Dropping cases or multiwall sacks from the tailgate of a truck, which causes severe damage, is not the normal treatment received by most containers during shipment.

Based on this concept of fatigue in the paper, a test instrument was assembled to apply repeated impacts on flat sections of paper cut from various bags. The original instrument used for this work was assembled from miscellaneous laboratory equipment. Many sheets of laminated paper used for pudding bags were tested on the laboratory model. The results are presented in Table I. Examination of this table reveals there are several series of tests which give an indication of a correlation between the impact-fatigue test and the drop

test. Bags numbered 2, 7, 9 and 11 withstood a relatively high number of impacts and had a high percentage of serviceability. Bags numbered 3, 4, 8 and 10 had low readings for both tests.

With the encouragement offered by some of the results in this table, a decision was made to build a working model. This instrument** is illustrated in Fig. 1.

A detailed outline of the test method has been included in an appendix to this article. This discussion will be confined to the main features of the test.

Discussion of method

The impacts in this test are applied by allowing metal balls to drop through a tube onto a rigidly held piece of paper. The number of balls required to fracture the paper is used as an indication of the impact-fatigue strength. The higher the number of impacts before breakage, the better the performance that can be expected of the bag.

When running the test, the specimen is placed in the clamp which is fixed at a 15-deg. angle with the horizontal plane. The paper is held by the instrument at an angle to permit the ball to bounce away from the paper after applying only one impact. The steel balls are dropped on the paper at the rate of one every two seconds until the specimen breaks.

It is desirable to keep the average number of impacts required to break the sample between 15 and 50. A large variety of papers may be kept within this range by using different-sized metal balls and by adjusting the height of the drop. Paper as fragile as 25-lb. glassine and as strong as 70-lb. kraft have been tested satisfactorily by this method.

Paper samples cut from pudding bags representing the previous samples as well as several new groups were tested on the new instrument. Results of the impact-fatigue tests on flat sections of paper are presented in Fig. 4. This graph indicates there is fairly good correlation between the impact-fatigue test on the flat sheet and the drop test. There are two exceptions. One paper had a high rating of 45 impacts and a low score of only 67% in the drop test. When the creased section of the gusset was tested by the impact-fatigue method the average result was 1.5. This indicates that although the paper was satisfactory it had been creased too severely on the bag machine. The same is true of the bag with a serviceability rating of 3%. In the drop tests on both bags most of the breakage was encountered on the gusset creases.

Fig. 5 shows a plot of impact-fatigue results obtained on creased specimens versus drop-test results. The correlation does not appear to be

** Patent on the Impact-Fatigue Tester has been applied for. It is expected that it will be manufactured by the Thwing-Albert Instrument Co., Philadelphia.

TABLE II—SUMMARY OF TESTS ON PUDDING BAGS*

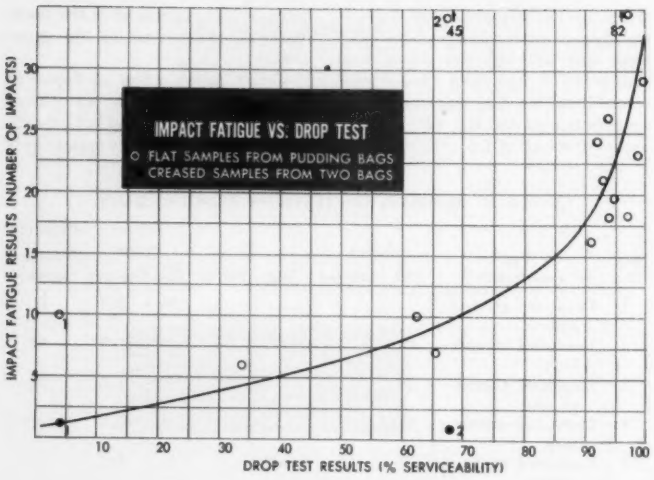
Bag No.	Bag construction	Mullen		Tear	Tensile	Impact fatigue		Drop test
		Flat	Creased			Flat	Creased	% Serviceability
1	Laminated glassine–kraft	..	..	..	..	23	5.2	99
2	Laminated glassine–kraft	34	32	35/39	..	24	12.5	92
3	Laminated glassine–glassine	29	..	..	..	6	1.0	33
4	Laminated glassine–kraft	31	..	..	..	18	10.0	97
5	Laminated triplex glassine	38	35	44/48	..	10	1.3	3
6	Laminated glassine–kraft	33	..	..	..	21	8.6	93
7	Laminated glassine–kraft	35	..	..	..	26	..	94
8	Laminated glassine–glassine	25	25	42/44	..	29	18.3	100
9	Laminated glassine–kraft	40	..	38/42	42/17	45	1.5	67
10	Laminated glassine–glassine	30	..	35/38	25/17	37	..	..
11	Waxed special glassine	37	..	22/23	..	10	3.5	62
12	Laminated glassine–kraft	..	..	..	..	16	..	91
13	Laminated glassine–glassine	33	33	33/38	..	7	1.0	65
14	Waxed special glassine	23	..	40/34	..	17	3.5	95
15	Waxed special glassine	25	..	42/37	..	18	7.0	94
16	Laminated kraft–glassine	35	34	48/52	..	..	..	75
17	Laminated glassine–glassine	28	26	37/43	..	..	..	0
18	Laminated glassine–kraft	29	26	45/49	..	..	..	87
19	Laminated glassine–kraft	38	37	44/47	..	..	..	94
20	Laminated glassine–glassine	33	28	33/38	..	..	..	46
21	Laminated glassine–kraft	41	..	52/54	43/17	82	73.0	92

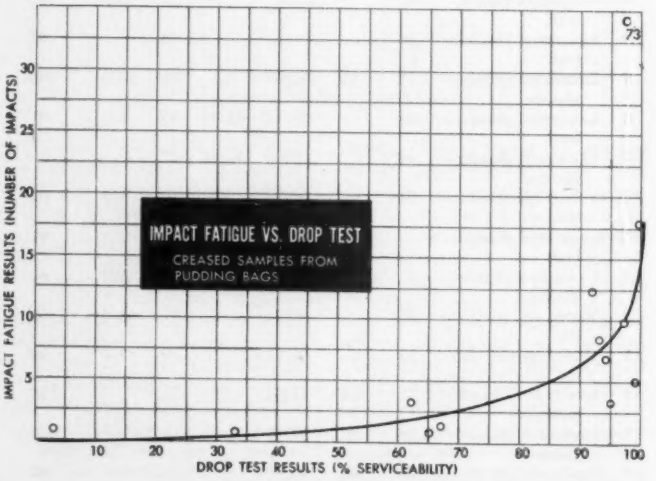
* Data taken from this table for Figs. 2, 3, 4 and 5.

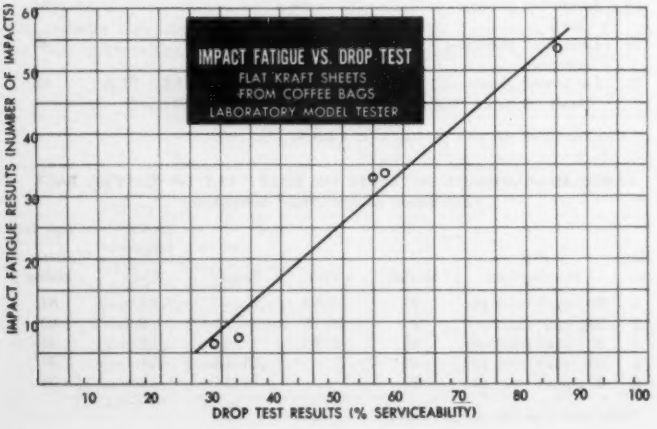
TABLE III—SUMMARY OF TESTS ON KRAFT PLY OF COFFEE BAGS*
(Laboratory impact-fatigue instrument)

Bag No.	Bag construction	Mullen	Tear	Tensile	Impact fatigue	Drop test
					Flat	% Serviceability
1	50# kraft outer ply	34	67/69	..	54	84
2	50# kraft outer ply	21	59/87	..	8	32
3	50# kraft outer ply	26	55/64	..	7	28
4	50# kraft outer ply	39	..	27/16	34	56
5	40# kraft outer ply	32	..	31/15	33	54

* Data taken from this table for Fig. 6.







as good when the creased sheet is used as when the flat sheet is used. However, the correlation might be improved by altering the severity of one or the other tests.

These results indicate that the most important factor in a good bag is the paper from which it is made. Although the bag machine *can* make a weak bag from a good sheet of paper, the information developed so far indicates that this usually is not the case. It will be necessary for the companies using bags to make impact-fatigue tests on both flat and creased sheets to prevent any poor bags being used. Running both types of tests makes it possible to differentiate between faulty fabrication and low-quality paper.

Fig. 6 presents the results of a few tests on the kraft ply of coffee bags. These tests were made on the laboratory machine. Fig. 7 shows the results of six tests made on the new Impact-Fatigue Tester. One test does not fall into line. A test was run on the creased section of the paper and the results showed that the gusset split on the first impact.

The information presented in these graphs has been taken from data sheets included as Tables II, III and IV. Mullen, tear, impact-fatigue and drop-test results are included for most bags.

Conditions

Many factors have to be controlled when running both tests. In the drop test the arrangement of the packages in the shipping container, the moisture content of the paper, the temperature of the paper and the severity of the test have to be controlled accurately. In the impact-fatigue test, the moisture content of the paper, the temperature of the paper, the grain direction of the paper in the test instrument, the size of the ball and the height of the drop are important.

As a rule, the average results in impact-fatigue tests are good, but the individual test results are scattered over a relatively wide range. This is particularly true of heavy kraft paper which has small spots about $^{3}/_{4}$ in. in diameter where the fibres are heavily matted and other small spots where the sheet is thin. As an illustration, a number of test specimens was held in front of a light and the thin and heavy spots located and marked. The dense spots and the light spots were tested separately. It

required an average of 177 impacts to break the dense spots and only 20 impacts to break the thin spots. Because of this, it is necessary to run a number of tests to obtain a reliable average result. Twenty samples have been used so far; however, it may be possible to reduce this number as the test is refined.

Although the wide scatter in the impact-fatigue results is an undesirable feature of the test, the same degree of scatter is encountered in drop tests. It is for this reason that, in drop tests, several shippers of filled bags are used. The average results are statistically sound, but the individual results are almost meaningless.

Fig. 8 shows the damage encountered in 24 individual coffee bags used in one drop test and the individual impact-fatigue results obtained on bags from the same batch. The drop-test results are plotted as the number of inches of tear in the bags. The impact-fatigue results are given as the number of balls required to fracture the bag. This chart shows the wide scatter that is obtained in both types of tests.

In general, the per cent variation of the results from the mean is no greater and is frequently smaller in impact-fatigue tests than in drop tests. Undoubtedly, as the work progresses small modifications can be made which will reduce the variation. However, it is doubtful whether the range of the results can be narrowed to equal the small variation encountered in some of the better-known paper tests.

When paper is subjected to repeated impacts the elasticity of the paper and its ability to return to its original shape influences the result of the test. This means the rate at which the impacts are applied will have an influence on the results. If the impacts are applied faster than one every two seconds the paper will break under a relatively small number of impacts. If the interval between impacts is increased, a larger number of impacts is required before the paper breaks. Only a limited amount of work has been done to investigate this variable. Thirty impacts per minute was selected because at this speed the impacts are not delivered too fast to be counted nor are they slow enough to require an excessive amount of time to run the test.

Since the interval at which the impacts are applied appears to influence

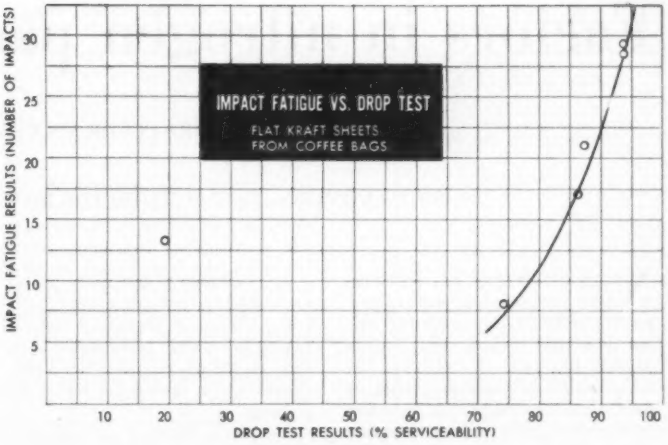


FIG. 8 SCATTER DIAGRAM
INDIVIDUAL DROP TEST AND INDIVIDUAL IMPACT FATIGUE TEST RESULTS

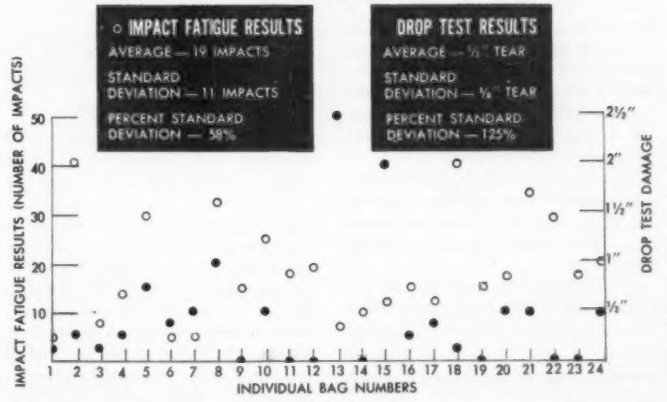


TABLE IV—SUMMARY OF TESTS ON KRAFT PLY OF COFFEE BAGS*
(Commercial impact-fatigue instrument)

Bag No.	Bag construction	Mullen	Tear	Tensile	Impact fatigue	Drop test
					Flat	% Serviceability
1	50# kraft outer ply	39	70/64	34/24	30	94
2	50# kraft outer ply	34	59/47	30/18	22	88
3	40# kraft outer ply	37	64/57	31/23	18	87
4	50# kraft outer ply	28	55/64	30/15	14	20
5	50# kraft outer ply	37	73/70	35/21	30	94
6	50# kraft outer ply	28	57/57	29/20	9	75

* Data taken from this table for Fig. 7.

the results, the paper must have some elastic properties. This may help to explain why there is so little correlation between the regular paper tests and a drop test on a filled shipping container. A bag in a drop test does not always break on the first drop and it may not break until the 15th or 20th drop. However, it is weakened by each succeeding drop until it finally breaks.

A succession of steel balls falling on the paper brings into play most of the strength characteristics encountered in the drop test. The first ball stretches the paper. As succeeding impacts are applied the paper (*This article continued on page 180*)

Factors in nitrogen packaging*

OUTLINE OF REQUIREMENTS FOR SUCCESSFUL FLEXIBLE PACKS

AND A CONTROL TEST METHOD FOR SPOTTING LEAKERS.

By W. S. Walker†

Nitrogen packaging has for years been accepted as a means of preventing oxidative deterioration of various perishable food products. Until recently this type of protection has been limited to products packed in rigid containers which could be relied upon to give a tight package. Because of the many cases where flexible film would be advantageous there has been an increasing demand for nitrogen-packing methods in this field. As a result The Linde Air Products Co. has in recent years worked in close cooperation with food processers, machinery manufacturers and producers and converters of flexible films to assist in the development of practical gas-packaging techniques.

It is the object here to outline some major requirements for the successful use of nitrogen in commercial operation. The following are some important factors:

1. Exclusion or removal of entrained and/or dissolved oxygen from the fresh product prior to packaging.
2. Exclusion of free-space oxygen in the package prior to sealing.
3. Use of a packaging material having low oxygen permeability to insure continued exclusion of atmospheric oxygen during the life of the package.
4. Proper selection and operation of packaging machines to insure a permanent gas-tight closure.
5. A dry, non-destructive method of testing packages for gas leaks.
6. Adoption of shipping and storage practices which will prevent mechanical failure of gas-tight packages.

Discussion of requirements

In the preparation of many food products it is desirable to exclude oxygen as early in the processing line as is practical. To illustrate an extreme example, the browning of apples or peaches can be prevented by blanketing the original operations with nitrogen and thus excluding the oxygen in the atmosphere which causes the browning to occur. Likewise, the Vitamin C content of freshly crushed tomatoes can be protected by nitrogen blanketing. Since we are here concerned primarily with the packaging of dry materials in flexible film, we will not elaborate on these extreme methods of nitrogen processing.

In general, most dry materials can be purged of entrained oxygen by (1) counter-current nitrogen at atmospheric pressure or (2) if necessary by giving a more extended pretreatment in the form of a vacuum to be followed with a nitrogen breakback. Some of these techniques can be incorporated into the filling hopper or the feed tube of automatic machinery which also forms the package. In all cases it is important to use quality-control tests to insure an oxygen-free material going into the package.

In addition to performing the above function, a good nitrogen-packaging machine must also protect the product during the packaging operation so that the minimum oxygen content of the free space in the package is being satisfactorily met. The packages coming from the machine should be checked periodically for oxygen content. Fig. 1 illustrates one apparatus used for checking packages in this manner. A rubber patch is cemented onto the package wall to reinforce a spot through which the hypodermic needle

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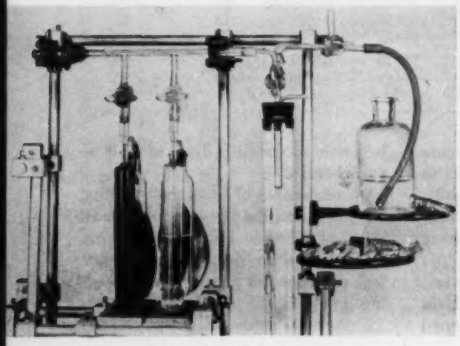
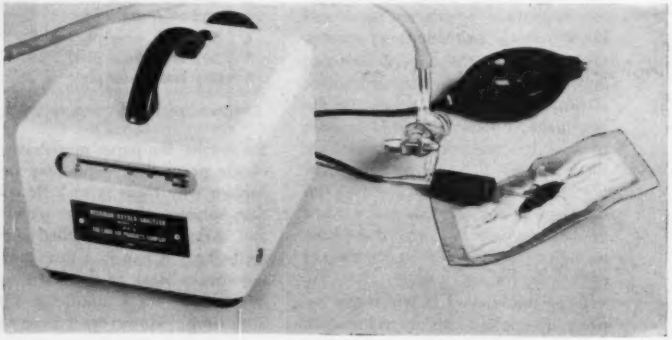
* From a paper delivered at the 12th Annual Forum of the Packaging Institute, New York, Oct. 25, 1950.

† Chemical Engineer, The Linde Air Products Co., Tonawanda, N. Y.

1. TEST SET-UP for determining gas content of flexible package, pierced by a hypodermic needle through cemented rubber patch. Standard Orsat apparatus is used.



2. SIMPLIFIED METHOD for quick production-line checks uses Beckman analyzer. In measuring oxygen, instrument is first purged with pure nitrogen from a cylinder. Gas inside the package is insufficient to purge instrument properly were it saturated with air at start of test.



is inserted. A small Orsat apparatus is then used to analyze the composition of the gas in the package. Depending on the product and the shelf life desired, acceptable oxygen concentrations may vary from one-half of 1% up to 3%. This same apparatus may be used later, during the life of the package, to determine leakers. In this case the Orsat is used to determine carbon dioxide as well as oxygen content.

Although the Orsat apparatus has for years been a standard method of gas determination, it is somewhat slow for making periodic production-line checks. Accordingly, some compromise has been made with accuracy in favor of speed, as illustrated in Fig. 2. The Beckman analyzer is purged with pure nitrogen from a cylinder so that its initial reading is zero oxygen. This is done because there is not sufficient volume of gas inside the package to purge the instrument properly were it saturated with air at the start of the test. The pure nitrogen purge does result in some error because the package actually may contain somewhat less than 2% of oxygen. After collecting data from several packages using this method and comparing them with known compositions, it has been determined that the accuracy is reasonable for practical control, since any severe leakers would show up immediately.

Films considered for nitrogen packing are those with low oxygen permeability. A sensitive method for evaluating these films has been reported by Zambito (1).‡ Work done since the publication of Mr. Zambito's paper has been added to give a revised set of values as shown in Table I. So far only one material has been found which can be used as a single transparent film with sufficiently low oxygen permeability to recommend it as a material for nitrogen packaging. However, it will be seen that there are several laminated and coated film materials, both of the transparent and the opaque variety, which give excellent performance in this regard.

Corresponding shelf-life tests of various products sealed in these films prove that this test method represents actual packaging conditions. Sufficient data are now available so that it is possible to predict what shelf life can be expected of certain materials when packaged in nitrogen with certain films. This point is illustrated in Fig. 3, where it has been assumed that the product would stand a maximum of 3% oxygen in the package before suffering ill effect. Using this chart, it is possible to pick the necessary oxygen permeability of a film to give the required shelf life.

Over the years there has been considerable work done on the water-vapor transmission rates of packaging materials, particularly films. However, relatively little attention has been given to the gas permeability of the same films. From the work done so far by Linde it is evident that all films which effectively exclude oxygen will also exclude moisture, although the reverse it not always true.

As an example, there are several film materials which are effective moisture barriers but are not effective oxygen barriers. Some of these films are used for the pre-packaging of fresh vegetables, since it is desired to retain their moisture inside the package and at the same time allow them to breathe because they are living organisms. These same materials may be used for packaging freshly ground coffee, since they will allow the carbon dioxide gas, which is generated over a period of several days, to diffuse through the wall of the bag and therefore prevent it from rupturing. These materials,

‡ Numbers in parentheses indentify "References" appended.

FIG. 3

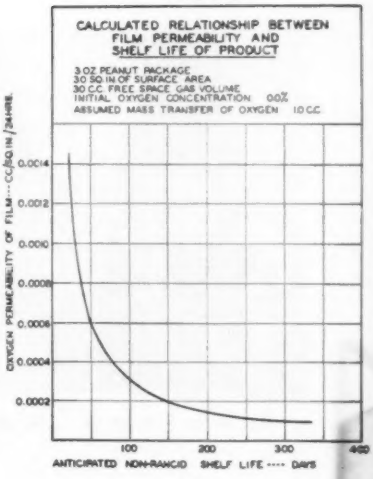


FIG. 4

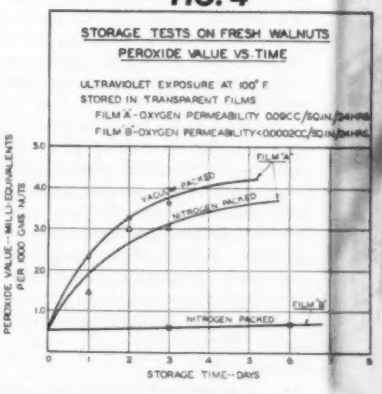
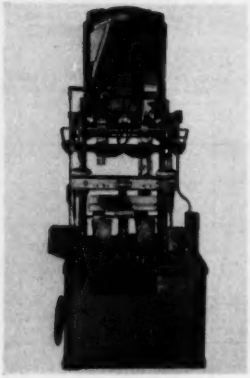


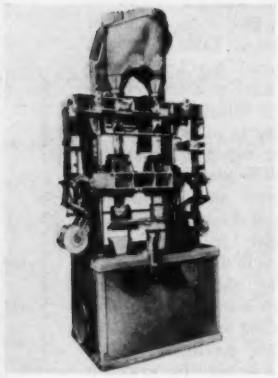
TABLE I—OXYGEN PERMEABILITY OF COMMERCIAL PACKAGING FILMS

Type of packaging material	*Thickness of film, In.*	*O_2 permeability,* cc./sq. in./24 hrs.*
Glassine	...	0.47
Vinyl chloride	0.0010	0.19
Polyethylene	0.0010	2.60
Rubber hydrochloride	0.0012	0.55
Regenerated cellulose	0.0010	0.09
Vinylidene chloride	0.0005	0.007
Vinylidene chloride	0.0015	0.0008
Vinylidene chloride	0.002	<0.0002
Modified vinylidene chloride	0.001	0.01
Polyethylene-coated kraft paper	0.0054	0.040
Laminates:		
Rubber hydrochloride/regenerated cellulose	0.0032	<0.0002
Polyethylene/regenerated cellulose	0.0030	<0.0002
Paper/regenerated cellulose/foil	0.0058	<0.00002
Double wall:		
Wax-coated regenerated cellulose	0.0025	<0.0006
Polyethylene 0.0015 in./vinylidene chloride 0.001 in.	0.0025	0.005
Acetate 0.001 in./vinylidene chloride 0.002 in.	0.003	0.0006

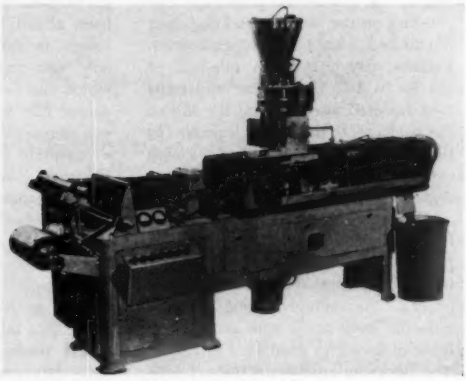
* Oxygen permeability rates determined at 100 deg. F. and 75% relative humidity.



5. Stokes & Smith Co.



6. Transparent Wrap Machine Corp.



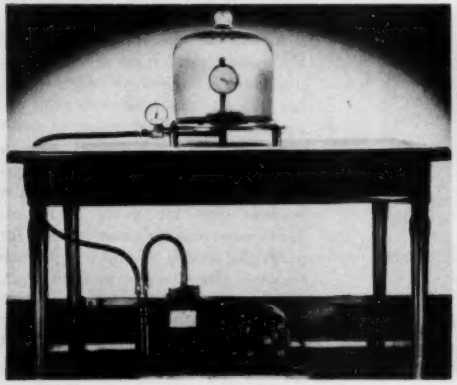
7. Bartelt Engineering Co.

however, do not prevent oxygen from re-entering the bag in seeking its partial pressure. However, the coffee is kept fresh as far as humidity control is concerned, due to the low water-vapor transmission rate of the materials used.

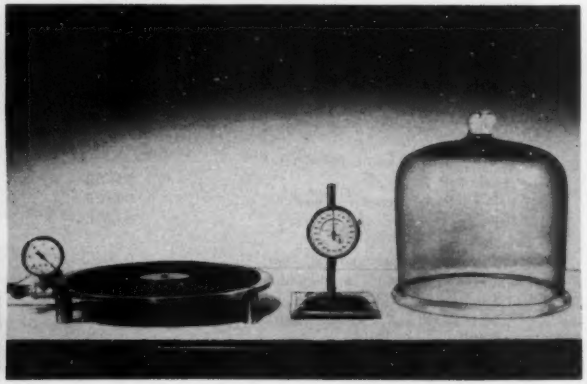
In addition to this effect there is also a common misconception that films which are capable of maintaining vacuums for an extended period of time are necessarily effective in preventing oxygen penetration into the product. In contradiction to this idea are results obtained on two packages of walnut meats put up in one such material. One package was evacuated and sealed, while the other package was evacuated, the vacuum inside broken back with nitrogen and then heat sealed. The latter procedure represents common practice in cases where it is desired to protect a product from oxygen but at the same time present a better package appearance. Several packages of each type were prepared and exposed to ultra-violet light in order to accelerate rancidity formation in the nuts. Fig. 4 shows the results of this test. It is apparent from the data that neither method of packaging walnuts is acceptable using a film with high oxygen permeability.

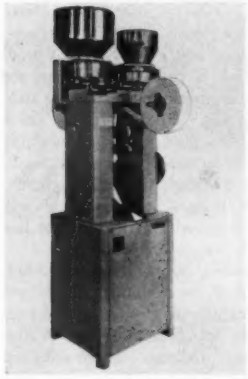
The vacuum-pack package can retain the same appearance for several months because the equilibrium between the film and the nut, with which it is in intimate contact, results in a steady absorption of atmospheric oxygen through the film and into the nut, forming peroxides and rancid products. Since this process represents no particular increase in volume in the gas going into the free space of the package, it will take a long time indeed to permeate sufficient air through the film into this free space to equal the atmospheric pressure on the outside of the bag. The appearance of a vacuum is thereby maintained for a long period of time while the nuts continue to ab-

11. EQUIPMENT SET-UP for Linde test for leakers. Sealed bags are maintained under controlled inflation by vacuum system. Changes of bag dimensions are measured by spindle and dial-thickness gauge.



12. TEST JAR DEMOUNTED, showing how package to be examined is positioned on platform below spindle of indicator with clearance adjusted to approximately ¼ in. Spindle will travel upward when bag is inflated; it will drop if the bag leaks.





8. Pak-Rapid, Inc., (formerly Harold P. Lewis & Co.).

9. Metropolitan Products Corp.

10. Seal-Vac Co., Inc.

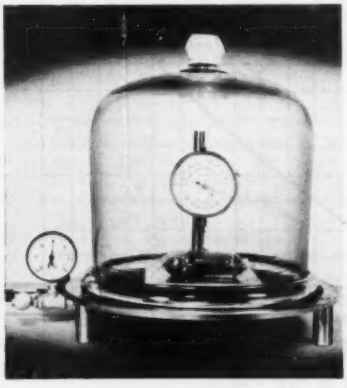
sorb atmospheric oxygen and turn rancid.

The use of standard nitrogen-packing procedures on the other bag did not protect the nuts either because the film material chosen for the test was of high oxygen permeability and allowed this gas to enter into the free space of the package, following which it combined with the nuts to form rancid products.

Film materials suitable for gas packing should give a durable package. Excessive folds, scuffing or creasing can cause leaks to develop during storage, transportation and handling. Suitable shipping containers should be provided to guard against these troubles, as mechanical failure of the package must be prevented.

After means have been established to assure an oxygen-free product going into the package and a suitable film material has been selected, it becomes necessary to consider methods by which satisfactory closures can be obtained at practical packaging speeds. Through the courtesy of several machinery manufacturers, Figs. 5 to 10, inclusive, are presented to describe some equipment which is being used for nitrogen-packaging operations in flexible films. Figs. 5, 6, 7 and 8 illustrate machines which can purge oxygen from the product and package at atmospheric pressures in nitrogen. The machines shown in Figs. 9 and 10 first evacuate air from the filled package, break back the vacuum with nitrogen to about atmospheric pressure and then seal.

13. BAG UNDER TEST, inflated by vacuum, raising spindle to a 64 reading. Bag maintaining static reading for 60 sec. is deemed non-leaking.



Development of leak test

The successful use of nitrogen depends on a tight package. This requires the cooperation of the machine, film and gas vendors. They must have a common understanding as to what constitutes an acceptable package, particularly with respect to leakage through seals. There is a need for a simple and impersonal leakage test to prove the package airtight.

The Food Technology Laboratory of The Linde Air Products Co. has recognized the need for such a test and made a start toward its development. The method measures dimensional changes of sealed bags maintained under conditions of controlled inflation by a vacuum system.

Changes of bag dimensions during the period of inflation may be measured by contacting the upper surface of the bag with the spindle of a sensitive dial-thickness gauge. Leakage is shown by the rate of deflation, which can be measured within thousandths of an inch. Even the smallest type of seam imperfections may be detected in this manner within minutes. The method has the advantages of being direct reading and rapid. Tight packages are not damaged during testing, thereby avoiding losses of product or packaging material. Periodic testing in production can be used to indicate good sealing performance.

The equipment used for this test is shown in Fig. 11. It consists of vacuum equipment including a vacuum pump, a glass bell jar and plate, and a platform for the sample with a dial indicator rigidly supported above it. The view in Fig. 12 shows how the package to be examined is positioned on the platform below the spindle of the indicator and the clearance between the bag and the foot of the spindle adjusted to approximately $^{1}/_{4}$ in. The height of the spindle foot above the bag is adjusted to permit appreciable travel of the spindle after the stabilizing period in case the bag leaks. It will seldom be found necessary to make adjustment in positioning of the dial indicator except when changing package size or product.

The bell jar is lowered into place,

the vacuum release valve is closed and the valve to the vacuum pump is opened. As the pressure is decreased, the package will inflate and raise the spindle as shown in Fig. 13. Examination of a large number of flexible-film packages has shown that leakage in packages processed at atmospheric pressure can be readily and accurately determined when operating at a vacuum of 15–17 in. of mercury (13–15 in. mercury absolute). When the desired vacuum is reached, the valve to the pump is closed and the system is given a 30-sec. stabilizing period to allow for normal flexing of the film; a reading of the dial indicator is then recorded. Any movement of the dial indicator after this period denotes a leaking package and, after releasing the vacuum in the bell jar, the bag should be discarded. A non-leaking package will maintain a static reading on the dial indicator.

Any package found to maintain a static dial reading for 60 sec. is considered to have a satisfactory closure. Curves showing typical examples of leaking and non-leaking flexible containers are shown in Fig. 14, where the rate of leakage as indicated by spindle travel was substantiated by analyses showing oxygen build-up in nitrogen-packaged products after storage.

Thus, containers indicating leakage as determined by the proposed method should be considered as unsatisfactory.

In case the principle of this laboratory instrument meets with the approval of the proper Packaging Institute committee, it is possible that some equipment builder may offer an industrial model of the instrument to the packaging field.

Benefits of nitrogen packing

When the foregoing requirements are followed in nitrogen packing it is possible to realize remarkable improvements in the shelf-life stability of various food products which otherwise deteriorate from oxidative reactions. Nitrogen packing has been used to correct specific complaints in regard to taste, odor, color, rancidity formation and retention of vitamin content. Transparent films can be used without fear of daylight exposure, since ultra-violet light cannot catalyze oxidative reactions unless oxygen is present. As mentioned previously, a good nitrogen package invariably gives excellent water-vapor protection also, although the reverse is not true in certain films. Another object of nitrogen packing in some cases is to make the use of refrigeration and/or anti-oxidants unnecessary.

There are many types of food products which have benefited from the use of nitrogen during processing and/or packaging. One large class which can be benefited is that containing edible oils in one form or another. In addition to salad oils and shortening products themselves, this list would include foods which contain oil or fats or which are cooked in them.

In general, the results from investigation of effects of storage atmosphere on the stability of freshly roasted peanuts also apply to other oil- or fat-containing products. These data are typical of what can be expected with other products and have been previously published by Bayes (2).

An illustration from Dr. Bayes' article is reproduced herewith as Fig. 15, showing storage tests on peanuts nitrogen packed in laminated film as compared to the control samples which were air packed. In the case of freshly roasted peanuts, the rancidity point has been determined by an average number of taste panels at a peroxide value of 3 milli-equivalents,

(*This article continued on page 192*)

FIG. 14

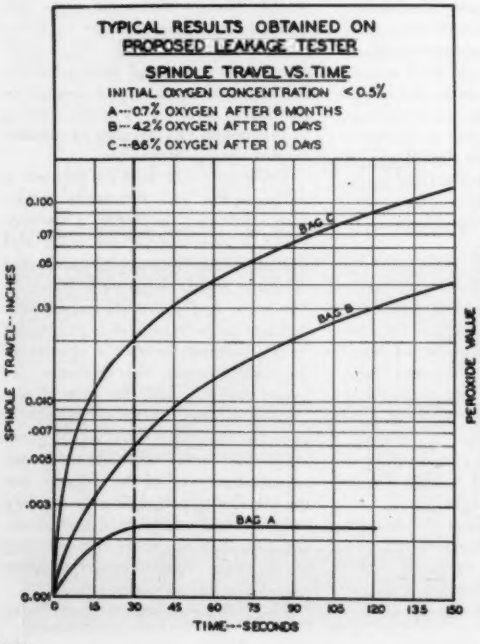
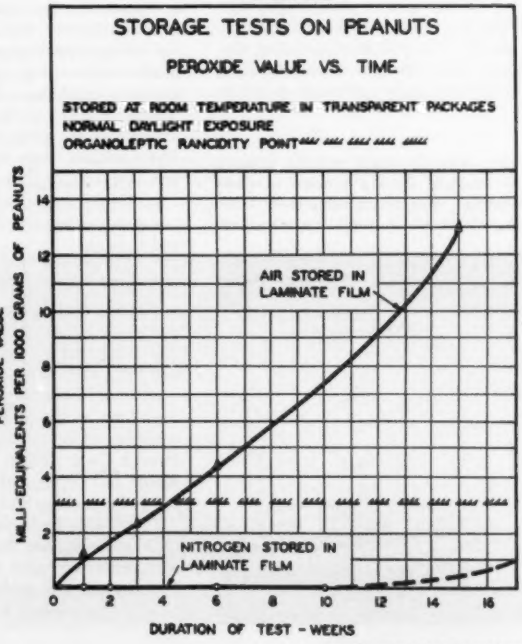


FIG. 15



CUDAHY

selected sparkling rigid containers made of **STYRON** *for high quality packaging!*

These sales-stimulating Styron rigid containers were used as a special sales offer to promote Delrich Oleomargarine. Containers come in two sizes with ruby lid and crystal clear bottoms. Molded by Southern California Plastics Company, 1805 Flower St., Glendale, California for The Cudahy Packing Company, Delrich Division, Omaha 7, Nebraska.

send in this coupon for more information

The Dow Chemical Company
Plastics Division, Dept. SRC-22
Midland, Michigan

Please send me detailed information about rigid containers made of Styron.

Name _____ Title _____

Company _____

Street _____

City _____ State _____

Products to be packaged _____

_____

SEEKING to match the high quality of their Delrich Oleomargarine with an equally fine container, The Cudahy Packing Company selected attractive rigid containers made of Styron. The "showcase" transparency of sturdy rigid containers made of Styron (Dow polystyrene) creates for Cudahy an outstanding customer preference for their product during this special sales offer.

Combine the eye-appealing protection of rigid containers made of Styron with their bonus value . . . RE-USE, and you have a two-pronged merchandising package that sells more products. These low-cost Styron rigid containers are available in a wide variety of standard sizes and shapes. They can also be manufactured to meet your individual specifications. For complete information or the names of qualified molders who can supply your packaging needs, write Dow today.

DOW plastics

Plastics Division, Dept. SRC-22 • THE DOW CHEMICAL COMPANY • MIDLAND, MICHIGAN

New York • Boston • Philadelphia • Washington • Atlanta • Cleveland • Detroit • Chicago • St. Louis • Houston • San Francisco • Los Angeles • Seattle • Dow Chemical of Canada, Limited, Toronto, Canada

Questions & Answers

This consultation service on packaging subjects is at your command. Simply address your questions to Technical Editor, Modern Packaging, 122 East 42nd St., New York 17, N. Y. Your name or other identification will not appear with any published answer.

Unit packs for crackers

QUESTION: For many years we have packed one of our crackers in a printed carton with a waxed-paper liner. Recently, we have tried sample packs using three separately wrapped portions each in cellophane. We find that this pack develops off-odors very quickly and we do not want to go into full production until we have keeping qualities equal to our present package. Can you suggest how to change the proposed package to improve it?

ANSWER: Your difficulty with the cellophane-wrapped units of crackers is due to the instability of your product. The crackers apparently are susceptible to the development of rancidity in the presence of oxygen and with time the process continues. The results of rancidity development are off-odors and ultimately off-flavors.

This process goes on in your present package, but you are not aware of it because the odors pass through the waxed-paper liner and carton wall and do not build up to the point of being easy to detect. However, cellophane, glassine and certain plastic films and coatings do not let these volatiles pass and thus they accumulate until they cannot be ignored when the package is opened.

The best answer to your problem is to improve the stability of your product so that it will have a reasonable shelf life in cellophane. If this cannot be done, then you must package the crackers in a waxed-sulphite type of paper which is available in some grades that are quite transparent.

Label adherence to aluminum

QUESTION: Can you advise us if it is possible to find a label which will adhere to aluminum? We have repeated difficulty with labels we have been using, since they do not stay on our aluminum containers for long periods of time.

ANSWER: There are a great many types of labels that can give satisfactory continuous and strong adhesion to an aluminum surface. The only qualification necessary is assurance that the surface is free of oils, grease, dust or any other foreign substances that would interfere with the bonding of the adhesive. Satisfactory adhesives can be found that have water as a base, provided the formulation is properly made. It is also possible to use adhesives that carry active solvents or labels which are activated by heat and applied by heat sealing. It is suggested that you arrange a meeting between your label supplier and your adhesive supplier to obtain samples of labels suggested by them as being an answer to your problem. Between these two suppliers you should have a wide variety of adhesives and labels to select from, since the problem is not too difficult if the right process and materials are used.

How to make spot-heat-sealed bags

QUESTION: We are interested in compounds for spot application to uncoated papers which will allow us to make bags and envelopes by heat sealing. We want to make all seals and seams in this manner and also have a band or coating on the bag for the customer to seal as a closure. Can you advise us on what compounds, process of application and machines we can use to make such bags?

ANSWER: The preferred compounds are certain specially developed hot-melt formulations. These formulations are made by several companies for spot application to papers for uses such as you have in mind. The compounds have a high percentage of resins and produce tack-free films of excellent seal strength and gloss. The compounds also are heat stable to allow them to remain molten for long periods during application.

Do not attempt to use compounds which have been developed or used for other purposes.

The method of application is to use heated knurled cylinders covering a pattern of the area to be coated. These cylinders in effect print the molten compound on the paper at predetermined areas.

The applicator is very compact and can be attached to the roll end of a bag machine, since the coating will cool very quickly. Such an applicator will allow you to make any type of bag or envelope with any combination of heat-sealable adhesive and pasting.

There are other methods of applying the hot-melt compound and also several patents in this field. However, you will probably have to make your own machines, since we know of no one offering this type of equipment for sale.

Stain-free cream-cheese package

QUESTION: We are packagers of cream cheese in England. We have encountered a problem and would greatly appreciate your advice and suggestions.

Our present package consists of a parchment liner with a foil overwrap. We are having difficulty with staining of the wrappers and the ends of the carton used to package the wrapped sections. This staining is the result of the whey which exudes from the cheese after it is packed. Can you give us any suggestions for overcoming this trouble?

ANSWER: A popular wrap used in this country for formed sections of cream cheese consists of an embossed thin foil laminated to a white porous paper. The laminating agent should be an adhesive which is not affected

(*This article continued on page 190*)

FOR SUB-ZERO PACKAGING

Tough, Pliable, Waterproof
Du Pont Polythene Film

Frozen fish require a packaging film that meets *many kinds* of protective needs. Walker's Fulton Fish Company of Chicago finds Du Pont Polythene Film ideal:

Provides transparency, yet guards against damage from shipping or handling by shoppers . . . resists tearing and puncturing. Du Pont Polythene Film is exceptionally tough and durable.

Conforms to irregular shapes, yet remains firm and tight . . . won't stiffen or crack at freezing temperatures. Polythene Film is pliable at *any* temperature.

Keeps proper amount of moisture inside the package, in spite of low relative humidity in frozen food cases . . . can be displayed on cracked ice without water soaking through. Polythene is impermeable to water and water vapor . . . readily seals to form a water-tight closure.

Gives extra convenience for the housewife in a refrigerator-bag package. She can open the bag, remove part of the contents, and twist it closed for storage in the refrigerator . . . all without tearing the bag.

Plain or printed Du Pont Polythene Film can be used in sheet, bag, liner, or laminated form to meet many special packaging requirements. Temporarily the demand for Du Pont Polythene Film exceeds supply—so we suggest you first check its availability before commercial adoption. For further information, write Film Department, E. I. du Pont de Nemours & Co. (Inc.), Wilmington 98, Delaware.

DU PONT POLYTHENE FILM
THE PACKAGING MATERIAL THAT'S

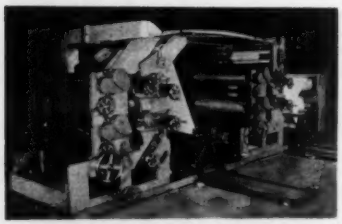
- Tough, strong, flexible
- Lightweight
- Chemically inert
- Highly resistant to water
- Moisture-vaporproof
- Nontoxic; suitable for use on food products
- Long-lasting—permitting re-use
- Sealable by heat, sewing and adhesives

Du Pont
Polythene Film
By the makers of Du Pont Cellophane
DU PONT
BETTER THINGS FOR BETTER LIVING . . . THROUGH CHEMISTRY

Equipment and Materials

VERSATILE MULTI-INK PRINTING PRESS

known as the Nilsaton Printer, developed in Sweden, is now being introduced in this country by The Sandy Hill Iron & Brass Works, Hudson Falls, N. Y. The multi-ink, multicolor press, it is said, successfully handles aniline, pigmented aniline, 100% pigment, oil, glassine and rotogravure inks. Unique construction features of the press eliminate rubber rollers. The fountain is moved in direct contact with the print rolls carrying the rubber plates. The paper, as it is being run over an impression roll, is also brought in contact with a print roll so that the ink is transferred directly from the fountain to the print roll and then to the paper without the use of rubber rollers. Because of the absence of rubber rollers, color changes have been cut to an average of five minutes, according to the manufacturers. Seasonal and climatic problems arising from rubber rolls are eliminated. Also, an appreciable reduction in the cost of plate production is reported. It is further claimed that the fountain measures the exact amount of ink needed to transfer to the paper, thus affording a great saving of ink. The machine prints cellophane, tissues, decorative papers, labels, boxboards, can stock and other materials. Speeds up to 600 ft. a minute are reported.



Special attachments are available, such as forced drying for higher speeds, slitter and counter roll rewinders, as well as compensators which make it possible to run the printing presses in combination with continuous process work. The machine can be coupled with Nilsa automatic bag-making machines handling single or multiwall SOS types of bags.

RECIPES ON END LABELS

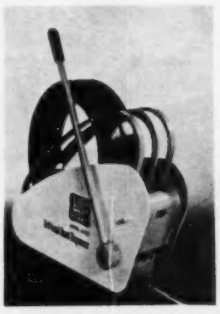
are being used in a campaign to increase bread sales, based on a series of 64 "meal-planning helps." The labels are being offered by the Pollock Paper Corp., 780 Frebis Ave., Columbus, Ohio. The series consists of eight rolls, with eight different recipes in each roll. This enables bakers to use the labels on a planned basis and to put a new assortment of recipes on their bread at regular intervals. These stock labels are being offered to the entire baking industry for general use and are sold at regular list price for three-color labels, with no engraving, license or royalty charges. These point-of-purchase suggestions on the end labels offer unusual ways to serve bread as a part of the meal, other than in the conventional "bread-and-butter" manner. Each recipe label is in a distinctive, eye-catching design to stop the shopper. In some market areas, all competitive bakers are planning a program in which the series is to be used on a cooperative basis, along with tie-in advertising.

ELECTRONIC SIDE-REGISTER CONTROL

that automatically and accurately maintains the lateral position of a moving web of material on slitting, rewinding and other processing machines has been announced by General Electric Co., Control Divisions, Schenectady 5, N. Y. The side-register control is designed to increase production by stepping up machine speeds and to minimize waste, decrease costs and provide a more uniform product. The control responds to a signal from a printed line on paper, plastic or cloth of $^1/_{32}$-in. minimum width, ignoring all signals from printing adjacent to the guide line on the trailing edge of the scanning sweep and, according to G-E engineers, follows broken lines of the same width and will not change web position if the web breaks. Instantaneous response is provided for errors, it is reported, as small as 0.001 in. or less. Two components make up the new side-register control: a rotary lens web scanner and a thyratron control panel. Capable of handling motors up to $^2/_3$ h.p., the thyratron reversing motor control feeds power to the correction motor so that correction is proportional to the amount of error detected by the web scanner.

UNIT-LOAD BAND DISPENSER

in stationary and portable models, designed to speed up applications of cut-to-length strapping, is available from Acme Steel Co., 2840 Archer Ave., Chicago 8, Ill. They hold and cut to length one or two coils of Unit-Load band, used to reinforce shipping containers and brace carload shipments. Bands are cut in a single, low-effort downstroke of the 30-in. hand lever. Any two-coil combination of $^3/_4$-in., $1^1/_4$-in. or 2-in. band, in all thicknesses, can be handled. Outer bars adjust to band width, while center separator bar and slide plates are stationary. Optional pair of separators to accommodate $^5/_8$-in. band are obtainable at an extra charge to the customer.



The portable model illustrated is equipped with a towing handle and hooded rubber casters. Noteworthy features include: V-belt controlled feed which minimizes over-running band; positioning brake which prevents crawling tendencies by raising swivel wheel from floor; built-in compartments for tools and accessories. Measurements of portable model E4DO are: height 36 in.; width $18^5/_8$ in.; length 42 in.; net weight 174 lbs. Over-all dimensions of stationary model E4CO are: height 34 in.; width $9^1/_4$ in.; length 33 in.; net weight 132 lbs.

TWO-SIDED ADHESIVE CELLOPHANE TAPE

particularly useful for securing ribbons and other decorative trim to packages is now being made by Minnesota Mining & Mfg. Co., St. Paul, Minn. This "Scotch" brand double-coated tape No. 666 adheres to paper, glass, wood and metal surfaces as well as many plastics. It has a transparent pressure-sensi-

DID PNEUMATIC HAVE A HAND IN YOUR DESSERT LAST NIGHT?

Installation of Pneumatic's Double Package Maker equipment in production of KRE-MEL Dessert at plant of Corn Products Refining Company, Argo, Ill.

PROBABLY YES—

because America's leading makers of packaged desserts use Pneumatic Packaging Machines!

And there's good reason why so many famous manufacturers rely on Pneumatic Packaging Machines. They've found that the sturdier construction, the precision engineering of Pneumatic Machines assure them of speedier, lower-cost package output!

Pneumatic's Double Package Maker, for instance, forms a protective lining and then shapes a carton around it. The snug-fitting inner bag allows maximum fill, offers far greater product protection.

That's just one example of Pneumatic's packaging efficiency and convenience. In a half-century of highly specialized operations, Pneumatic research has developed more than ninety different machines to handle your packaging and bottling needs, speedily, competently . . . to give you Pneumatic's famous "lower cost per container" performance!

★ ★ ★

PNEUMATIC SCALE CORPORATION, LTD., 82 Newport Ave., Quincy 71, Mass. Branch Offices in New York, New York; Chicago, Illinios; San Francisco and Los Angeles, California; Seattle, Washington.

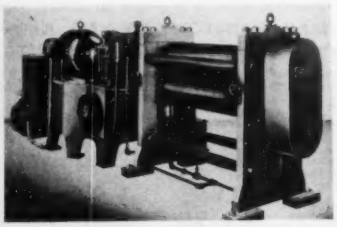
PNEUMATIC **PACKAGING AND BOTTLING MACHINERY**

Equipment and Materials
Continued

tive adhesive that is said not to ooze at the edges, bleed into nor discolor fine papers. Supplied with a red plastic liner, both may be applied to a package, the liner peeled off and the decorative trim then placed firmly in position on the tape, providing immediate adhesion. It may also be applied from manual dispensers which automatically peel off the liner as the tape is pulled from the dispenser. It is available in a 1,296-in. roll, in widths of 1/4, 5/8, 1/2, 3/4 and 1 in., with other widths available on special order.

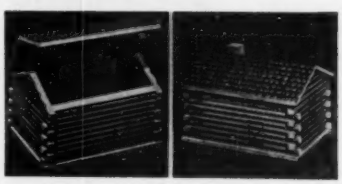
NEW HIGH-SPEED METHOD OF EMBOSSING

developed by Modern Engraving & Machine Co., Hillside, N. J., entails use of their new Master hydraulic embossing machine and engraved, matched, hardened-steel rolls. The precision-engraved and specially treated matched-steel rolls are said to be so perfectly mated that any paper or paperboard ranging from 10-lb. tissue to 0.125 paper board can be embossed with almost any pattern without fracture or distortion. It is stated that as many as 15 sheets of 10-lb. tissue have been embossed in a single operation with a 50/50 pattern without variation in the pattern in any of the sheets and that as many as four sheets of 80-lb. paper have been embossed with comparable results. Any paper can be embossed up to 1,000 ft. per minute, it is claimed, and two or more webs being successfully embossed at that speed result in a production of 2,000 ft. per minute as compared with existing embossing machines which produce not more than 400 ft. per minute of a single web. No make-ready is required with the engraved matched hardened steel embossing rolls, which reduce scrap and eliminate lost production due to fractures in paper back-up rolls caused by splices and material variation; also back-up roll repairs and replacement are eliminated. A predetermined clearance engraved in the rolls permits the paper to flow through both rolls without damaging the fibre or reducing the Mullen test of the paper, it is said, while maintaining an absolute uniform embossed pattern.



CALIFORNIA REDWOOD CABIN CONTAINERS

suitable for packaging candy and fruit is offered by Golden State Box Factory, 1200 East Eighth St., Los Angeles 21, Calif., manufacturers of novelty wooden boxes. These odorless log cabins, made from the genuine giant redwoods of California, are 4 3/4 in. long, 3 1/4 in. wide and 2 1/8 in. deep and may be re-used for such items as cigarettes, jewelry, etc. Each cabin is packed in an individual corrugated container, ready for mailing.



NEW ROTOGRAVURE PROOF PRESSES

in widths from 4 in. up, built for laboratory use as well as for converters of paper, foil and film, have been announced by

Smoker's vision of bliss...

WHAT a boon to shopper and shop, the handsome pipe-size "showcase" above! Made of tough, brilliantly transparent Kodapak Sheet, it invites close inspection . . . encourages the buyer to feast his eyes on the product's every detail. At the same time, it protects the merchandise itself from unnecessary handling, shopwear, and from dust and dirt.

Two basic forms of Kodapak Sheet are available: Kodapak I Sheet, cellulose acetate, gauges up to 0.060″; Kodapak II Sheet, cellulose acetate butyrate, gauges up to 0.002″. Both are made under the same rigid conditions and to the same high standards as Kodak photographic film base.

For further information about Kodapak Sheet, its fabrication and end uses, consult your nearest representative, or write Kodak. If you have a particularly complicated problem, a day or two in the Kodapak Demonstration Laboratory in Rochester will prove helpful.

Cellulose Products Division, EASTMAN KODAK COMPANY, Rochester 4, N. Y.

Sales Offices:
New York, Chicago.

District Sales Representatives:
Cleveland, Dallas,
Philadelphia, Providence.

Pacific Coast Distributor:
Wilson & Geo. Meyer & Co., San Francisco,
Los Angeles, Portland, Seattle.

Canadian Distributor:
Paper Sales, Limited, Toronto, Montreal.

FOR THE DISPLAY YOU WANT . . . THE PROTECTION YOU NEED

Kodapak Sheet

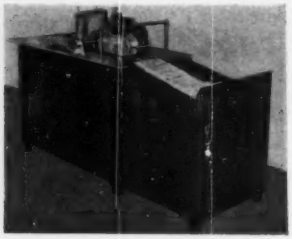
"Kodapak" is a trade-mark

Kodak

Equipment and Materials
Continued

Inta-Roto Machine Co., Richmond, Va. Electric-motor driven, they are designed for proving with gravure and aniline inks and for testing inks, laminants and heat-seal materials. A new type of pressure adjustment and other innovations in operating features are said to be incorporated in this new line.

REDESIGNED CODE-DATING, IMPRINTING MACHINES manufactured by Adolph Gottscho, Inc., Hillside 5, N. J., are said to incorporate several entirely new features. The new Cartoncoda machine has an improved ink-control system (including enclosed ink fountain, metering roll and doctor blade) that is said to permit the use of fast-drying and special inks, enabling the delivery of up to 7,200 clean, sharp, registered imprints an hour even on waxed, resin-coated and other hard-to-print stocks. Because of its wider range of adjustability for width, length and thickness, the newly designed unit, can be used on a greater variety of package sizes and will handle corrugated cartons. The Model C accommodates flat packages or package components ranging from 2 to 7 in. wide and 3 to 12 in. long (round caps of 3 to 7 in. in diameter); the range of Model D is from 3 to 14 in. wide and $4^1/_2$ to 22 in. long (3 to 7 in. in diameter). Interchangeable rubber type or dies and die wheels expedite imprint change-over. Imprints of letters, figures, symbols or special designs may range in size from $^1/_{16}$ in. up to the size of the package surface. Only part-time attention of an operator is required for feeding; thus the machine may be used in conjunction with an existing production-line operation. The imprinter is electrically powered and imprinted packages are restacked at the discharge end. All actions of the machine are fully synchronized to assure accurate register of imprints.



BARREL AND DRUM COVERS made of Neoprene-impregnated paper have been introduced by Chase Bag Co., 309 W. Jackson Blvd., Chicago 6, Ill. Where barrels and drums have been used to handle material in process, these paper covers have proved to be an efficient and economical means of guarding the contents against rain and unwanted particles. Originally developed for use in a chemical plant, which now uses the covers in volume to keep intermediate chemicals clean and dry during temporary storage or within-plant shipping, they serve a like purpose on barrels or drums of other products requiring similar protection. The covers are made from a heavy, single-ply creped kraft containing a small percentage of Neoprene synthetic rubber—the latter said to add greatly to the finished paper's wet strength and imparting resistance to sunlight, oils and chemicals.

Like an oversized household refrigerator bowl cover, the top is round, the diameter size of the barrel, to which is stitched a short skirt hemmed with an elastic band around the bottom edge for holding it firmly in place. When used outdoors and rain water collects in the covers and is allowed to stand for days, there is no evidence of water seepage, the company claims. Covers may be re-used four or five times and even a one-time use is said to be more economical for covering intermediates than either the wooden cover or metal lid and requires less time for application and removal. Presently made in one size—to fit a standard 55-gal. drum or barrel—the company will make other sizes and shapes if demand warrants.

Plants and People

The American Can Co., New York, announces the following promotions to sales executive posts: **E. K. Walsh** has been appointed assistant general manager of sales; **B. R. Wood** succeeds Mr. Walsh

E. K. Walsh *B. R. Wood* *G. F. Henschel*

as manager of sales for the Atlantic division and is succeeded by **G. F. Henschel**, formerly sales division manager in the Atlantic division.

American Can Co.'s new fibre milk-container plant at Halethorpe, on the outskirts of Baltimore, was officially opened recently. This is the can company's seventh milk-container factory in the U. S., and will serve Baltimore, Philadelphia, Washington and other cities as far south as Florida and as far west as Tennessee. The factory contains 150,000 sq. ft. of floor space and will have a capacity of 250 million containers a year. **D. B. DeLand**, formerly assistant manager in charge of milk-container production at the Jersey City, N. J., plant, is the resident manager at Halethorpe.

Walter L. Hardy has been appointed vice president of the **Specialty Package Division, Leeds Sales Co., Inc.**, and general manager of **Leedpak, Inc.**, wholly-owned subsidiary, specializing in rotogravure printing of papers, films and foils. He will handle development and expansion of the company, which include newly acquired facilities installed at Leedpak, Inc., for high-speed production of quality rotogravure printing on papers, films, foils and laminations of these. Mr. Hardy, following the war when he was in charge of packaging for the U. S. Army Air Forces, was associated with the Shellmar Products Corp. and with the Floyd A. Holes Co.

W. L. Hardy

The Dobeckmun Co., converter of films and foils, Cleveland, Ohio, announces the purchase of **Ben-Mont Papers, Inc.**, Bennington, Vt. Ben-Mont is a supplier of gift wraps and paper draperies to syndicate stores and, more recently, developed a line of plastic-coated papers for military and industrial uses. Included in the purchase is a tissue-paper mill at Wells River, Vt. Over 200,000 sq. ft. of buildings on 10 acres comprise the company's real estate holdings. The Vermont location gives Dobeckmun a third manufacturing and distributing center—the other two plants being located in Cleveland and in Berkeley, Calif.

Harold P. Lewis & Co., Inc., Philadelphia, makers of Roto-Pak and Auto-Pak unit-packaging machines, have changed the company name and address to **Pak-Rapid, Inc.**, 530 N. 21st St., Philadelphia.

The Goodyear Tire & Rubber Co., Akron, Ohio, announces the appointment of **J. D. Stimpson** as a Pliofilm packaging specialist for self-service meats. Mr. Stimpson will serve as a consultant to self-service meat operators and will be responsible for the sales and distribution program on the company's new FM-1 Pliofilm. He will be staff assistant to **E. H. Dours**, assistant manager of the Pliofilm Department.

J. D. Stimpson

Purchase by **Lassiter Press, Inc.**, Charlotte, N. C., of the cellophane division of **Thomas M. Royal & Co.**, Philadelphia, has been announced by **J. Hanes Lassiter** as the first step in the corporation's $600,000 expansion program. **Mr. Lassiter**, president of the firm, said that the Philadelphia plant will probably be operated as the Royal division of the Lassiter company as a wholly owned subsidiary. The company also has a plant in Greensboro, N. C., operated as the Transparent Packings division and expansion plans call for two more plants in the South.

Union Bag & Paper Corp.'s 1949 Annual Report was judged best in the paper-products industry in the annual survey conducted by *Financial World* magazine, the third "Oscar of Industry" awarded to Union. The bronze "Oscar" has been made a part of an exhibit in the company's New York office.

The executive offices of **International Printing Ink** are now in their new quarters in the Fawcett Bldg., 67 W. 44th St., New York 18. Included in the move are the purchasing, accounting and promotion departments, thus completing plans announced earlier this year to consolidate all major executive offices and staff functions of Interchemical Corp. in one modern building. The Eastern district and New York sales and service branch will remain at 636 Eleventh Ave.

L. T. Sheffield, president of **The Sheffield Tube Corp.**, New London, Conn., has been appointed for the second successive year by the Connecticut Chamber of Commerce as its district vice president for the county of New London.

L. T. Sheffield

The Container Corp. of America announces that the **Sefton Fibre Co.** of St. Louis, a wholly owned subsidiary, has acquired land in Piqua, Ohio, on which to erect a modern building to be equipped for the manufacture of fibre cans. Construction will be started in January and the plant is expected to be in operation by the middle of 1951. The building will contain approximately 50,000 sq. ft. of floor space.

The Steiner Plastics Mfg. Co., Inc., is moving to a new plant at Pratt Oval, Glen Cove, N. Y. The new plant will triple manufacturing space to 75,000 sq. ft. The company, which specializes in the fabrication and forming of plastic sheet materials and merchandising aids, expects that the new facilities will enable tripling its present production. In order to maintain and increase present rates of delivery while the new plant gets into operation, Steiner will make the move over a period of a year, maintaining present offices at 47-30 33rd St., Long Island City, until the end of 1951.

C. W. Thomas, Jr.

Claude W. Thomas, Jr., has been appointed Eastern regional merchandising manager of the **Glass Container Division** of **Owens-Illinois Glass Co.** Mr. Thomas, formerly sales manager of the Modern Food Sales Co., will have his headquarters in the New York office of Owens-Illinois. Associated with him as field merchandising representatives are **Jon I. Clement** and **Al A. Schuster.**

John Birrell has joined **Morningstar, Nicol, Inc.**, New York, starch and dextrine manufacturer, in a technical sales

Creative Package Engineering

this corrugated "spectacular" box

Attracts attention... advertises... identifies the manufacturer... dramatizes the product—sells. Engineered to protect its contents, the box saves packaging time and labor, cuts packaging costs, simplifies handling difficulties. Your product is worthy of these advantages. For more aggressive package action, consult Hinde & Dauch, Executive Offices, 5002 Decatur St., Sandusky, Ohio.

H&D®

HINDE & DAUCH

Authority on Packaging

Fact-packed booklet of packaging information "How To Pack It"—32 pages of valuable data . . . 80 vivid photos . . . hundreds of packaging ideas. Write for your copy.

FACTORIES AND SALES OFFICES IN: Baltimore • Buffalo • Chicago • Cleveland • Detroit • Gloucester, N. J. • Hoboken, N. J. • Kansas City, Kan. • Lenoir, N. C. • Richmond, Va. • Sandusky, Ohio St. Louis • Watertown, Mass. SALES OFFICES IN: Akron • Battle Creek • Cincinnati • Columbus • Denver • Erie, Pa. • Fairfield, Conn. • Findlay, Ohio • Greensboro, N. C. • Indianapolis • Miami Minneapolis • Olean, N. Y. • Omaha • Philadelphia • Pittsburgh • Reading, Pa. • Roanoke, Va. • Rochester • Toledo • Worcester, Mass. IN CANADA, HINDE & DAUCH PAPER CO. OF CANADA, LTD., Toronto • Montreal • Chatham • Calgary • Halifax • Hamilton • Kitchener • London • Peterborough • Quebec • Regina • St. John, N. B. • St. John's, Newfoundland • Vancouver • Winnipeg

Plants & People
(Continued)

capacity. His headquarters will be New York, but his duties will include traveling to various sales territories to assist in the application of dextrines and starch products to industries served by the Morningstar subsidiary, Paisley Products, Inc., as well as contacts for the parent company. Previously, Mr. Birrell had been with Stein Hall & Co. for 25 years.

W. Heller, Sr.

William Heller, Sr., has become chairman of the board of directors of **Milprint, Inc.,** Milwaukee. He is succeeded in the post of president by **Roland N. Ewens,** who is moving up from executive vice president to the posts of president and treasurer. **Arthur Snapper,** now secretary, will be executive vice president. Mr. Heller announced the new appointments at a luncheon celebrating his 65th birthday. Mr. Heller looked back on his 49 years with the firm, which he founded with his brother some 51 years ago.

R. N. Ewens

Paul E. Fischer has joined **The Sperry Corp., E. G. Staude Division,** as head of research and engineering. Mr. Fischer was chief engineer of the E. G. Staude Mfg. Co. prior to joining General Mills' Mechanical Division in 1946. As head of the mechanical engineering research department, Mr. Fischer was credited with many developments in automatic filling and production machinery.

P. E. Fischer

Ground-breaking ceremonies for the new $2,500,000 plant of **Consolidated Lithographing Corp.** were held recently at Carle Place, Nassau County, Long Island, N. Y. Work on the building will take about a year. The new building will serve as executive headquarters as well as the firm's key production plant.

Walter F. Garlow has been appointed as sales promotion manager of **The Howe Scale Co.,** Rutland, Vt.

O. C. Noble, president of **Tygart Valley Glass Co.,** Washington, Pa., was honored at a testimonial dinner recently on the

Plants & People (Continued)

anniversary of his 50th year of service to the industry. Mr. Noble, a pioneer in the glass industry, began working in 1900 with the Atlas Glass Co.

L. P. Gajda

The Arthur Colton Co., Detroit, has appointed **Leo P. Gajda** as chief engineer and **Cecil Edgar** as chief draftsman. The Colton Co., producer of packaging and pharmaceutical machinery and plastic and powdered-metal presses, is a division of Snyder Tool & Engineering Co. Mr. Gajda, in addition to his new responsibilities, continues as chief engineer of the Snyder organization.

C. Edgar

Oxford Paper Co., New York, announces the appointment of **H. Paul Petzold** as assistant mill manager of the Oxford Miami Paper Co., West Carrollton, Ohio. Mr. Petzold has been at Oxford Miami since 1937.

Quentin Fiore, letterer and calligrapher, announces a change of address to 141 E. 40th St., New York.

Announcement has been made of the establishment of the national offices of **Delou, Inc.**, at 90 West St., New York 6, for the importation of a complete line of natural gums and resins. Many of the gums and resins imported by the company are used in lacquers and varnishes applied to packaging materials.

William H. Wilson has been named president of **Wil-Pak Packing Products, Inc.**, New York. The corporation specializes in moisture-vaporproof bags, waterproof paper case liners and allied materials.

J. S. Snelham, formerly vice president and comptroller of **Continental Can Co., Inc.**, has been promoted to the new position of vice president in charge of finance.

Continental Can won first prize for the best annual report of the food-containers industry in this year's *Financial World* Survey of Annual Reports. The "Oscar of Industry" trophy was presented to **Hans A. Eggerss**, president.

William A. Marsteller has resigned, effective Jan. 1, as vice president of the Rockwell Mfg. Co. of Pittsburgh and as vice president and director of Edward

For face creams, jar #AW-7159, 3-oz. size.
Note extra-wide mouth for easy filling, convenient use.

Functioneered Duraglas Rounds

. . . a natural for sales and production!

Sales managers want a low-cost container to help keep their product's selling price competitive . . . an attractive container that will appeal to women . . . transparency, so customers can *see* what they're buying.

Duraglas Rounds fill the bill.

Production managers want a sturdy container that can take the bumps and shocks of fast filling and capping . . . They want transparency too, so jars can be inspected *after* filling . . . and for extra protection, dependable tight-sealing closures.

Duraglas Rounds fill the bill again! Through research we learn the features and functions wanted by consumers, production men and salesmen. Then we functioneer a container to meet those needs.

That's why, whatever your product —*drug, chemical or toiletry*—among the more than 1400 stock Duraglas containers there is sure to be one that fills *your* bill. For prompt courteous service, call the Owens-Illinois branch office near you.

Duraglas Containers are Protectors of Quality

TRADE MARK REG. U.S. PAT. OFF.

OWENS-ILLINOIS GLASS COMPANY • TOLEDO 1, OHIO • BRANCHES IN PRINCIPAL CITIES

Plants & People
(Continued)

Valves, Inc., East Chicago, Inc., to establish **The Marsteller Co.**, consultants in marketing and advertising. The new firm will be located at 612 N. Michigan Ave., Chicago, after Jan. 1.

Reuben B. Robertson, chairman of the board of **The Champion Paper & Fibre Co.**, has been declared "Man of the South" in a poll of editors, industrialists, bankers and other leaders of the South, conducted by *Dixie Business* magazine. Each year readers of the magazine nominate the South's 50 foremost business leaders and by popular vote the "Man of the South" is selected.


Robertson

The Champion Paper & Fibre Co. was judged in the *Financial World* Survey of Annual Reports as having the best annual report of the pulp and paper industry. This marks the third year that Champion's report has received the bronze "Oscar of Industry" trophy.

Recently announced by **The Gardner Board & Carton Co.**, Middletown, Ohio, are the appointments of **Robert E. Van Rosen** as head of the firm's carton development section. Mr. Van Rosen has been associated in the packaging field for 20 years, having conducted his own business in New York.


Van Rosen

William A. Ringler has been given a special assignment with the carton development service. **Elkins O. Whitman** has been named supervisor of industrial relations for Gardner's Lockland plant and **W. W. Griest** has been named as the company statistician.

Edward T. Gardner, president of The Gardner Board & Carton Co. and co-founder of the organization 50 years ago, sealed the cornerstone of a new retail box plant at the Lockland operations of the company at the dedication ceremonies recently. Representatives of the community, management and employees were present. The installation, when completed early next year, will represent an investment of approximately $1,500,000 and will contain 120,000 sq. ft. of floor space. Mr. Gardner is the only living co-founder of the present company, whose golden jubilee in business is being observed. His two sons, **Edward T.**

Dealer mailing piece

Colorful window strips

SPERRY *Candy Company*

MANUFACTURING CONFECTIONERS — 133 W. PITTSBURGH AVE. MILWAUKEE 4, WISCONSIN

"Milprint 'follow through' service helps us build a better coordinated program."

Mr. William Heller, President
Milprint, Inc.
431 W. Florida St.
Milwaukee 1, Wisconsin

Dear Mr. Heller:

We thought you would like to have our comments on the highly satisfactory results we are getting with your "follow through" service.

It's a real help to have so many types of material and printing processes available from a single source and to have the helpful counsel of merchandising men who understand our kind of selling problems.

We know from experience that Milprint "follow through" service isn't just a claim. It saves us time and helps us build a better coordinated program. Keep up the good work!

Sincerely yours,

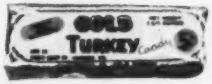
Fred F. Foster

Fred F. Foster, President
Sperry Candy Company

FF:st

P.S. Milprint also produces this stationery and calling cards to match.

Candy bar wrappers
Foil-Glassine-Cellophane



Lithographed box overwraps

Lithographed display carton

Put Milprint "follow through" service to work for you. Call your local Milprint man or write today.

Milprint INC
PACKAGING MATERIALS
LITHOGRAPHY & PRINTING

General Offices, Milwaukee, Wisconsin
Sales Offices in All Principal Cities

Printed Cellophane, Pliofilm, Acetate, Glassine, Plastic Films, Foils, Folding Cartons, Lithographed Displays, Printed Promotional Material

This insert printed by Milprint, Inc.

Plants & People

(Continued)

Gardner, Jr., vice president in charge of finance, and **William E. Gardner,** assistant director of board sales, are both directors of the Gardner organization.

Bensing Bros. & Deeney, makers of BBD printing inks, will occupy their new home office building at 3301 Hunting Park Ave., Philadelphia 32, in January. The Chicago plant, which has been undergoing construction, is now enlarged to three times its former size. Address of the Chicago branch, 2358 N. Seeley Ave., remains unchanged.

Inta-Roto Machine Co., Inc., Richmond, Va., announces the appointment of **Albert H. Merz** as president and **Otto Rich,** chief engineer, as secretary-treasurer.

The Arner Co.'s former storage plant on Van Rensselaer St., Buffalo, is being converted into a full-scale packaging department for its line of pills and tablets.

Ernest C. Britton has been appointed vice president of the **Theodore W. Foster & Bro. Co., Inc.,** Providence, R. I., manufacturers of cosmetic containers. Mr. Britton will coordinate all engineering, production and sales activities.

C. A. Tacquard has been appointed manager of the **Waterproof-Ohio Division** of **Pollock Paper Corp.,** Columbus, Ohio.

The Dow Chemical Co. has started construction of a new addition to the plastics building at Midland, Mich., for increased production of Styron plastic. A new plant is being erected at Allyn's Point, Conn., and a site has been obtained in Los Angeles for another plant.

William H. Doble, founder and chairman of the board of **Pneumatic Scale Corp., Ltd.,** Quincy, Mass., died suddenly on Oct. 29 at his summer home in West Harwich, on Cape Cod. He was 88 years of age. A pioneer in the specialized field of packaging, Mr. Doble was internationally known as an authority on automatic packaging methods. He was one of the first to apply these methods to food packaging and the result of his efforts played a major role in the transition from cracker-barrel levels.

W. H. Doble

William B. Darling, New England sales representative for the **Riegel Paper Corp.,** New York, died on Oct. 28.

For Your Information

The National Paper Box Mfrs. Assn., Inc., has announced it is sponsoring a set-up box competition, for which the association has set up a $10,000 appropriation. A committee is now working out the problems of classification, rules, judges, entries, etc., and full information will be released when the planning has been completed. Entries and prize winners will be on display at the association's annual convention in Atlantic City, June 4–6, 1951. Duplicate awards will be made for all winning boxes—one for the boxmaker and one for the customer. The association feels that this will be an excellent opportunity for boxmakers to get credit for the outstanding boxes they have developed. The committee working on the program consists of **W. C. Milsom**, F. N. Burt Co.; **R. H. Dowd**, Dennison Mfg. Co.; **C. C. Vatter**, Bradley & Gilbert Co.; **Douglas T. Neale** of Edwin J. Schoettle Co., chairman.

At the recent annual meeting of the **Waterproof Paper Mfrs. Assn.**, **Charles G. Wood**, president of Simplex Paper Corp., was unanimously chosen president to succeed **A. J. Thiel** of the Angier Corp. **George W. Chadwick** of W. Ralston & Co., Inc., was chosen vice president. The new board of directors, in addition to the president and vice president, consists of **H. A. Anderson** of Sisalkraft Co., **S. A. Feely** of Keystone Mfg. Co., **S. E. Griffiths, Jr.**, of National Waterproof Papers, Inc., **J. D. Johnston** of Union Bag & Paper Corp., **G. E. McCorison** of Thilmany Pulp & Paper Co., **A. J. Thiel** of Angier Corp., **L. R. Watson** of Tuttle Press Co., **David E. Ryan** of Edgewater Paper Co. and **Fred Shepherd** of Ruberoid Co. **Philip O. Deitsch** was re-appointed administrative offer.

The Department of Defense has announced that prospective bidders for Army Quartermaster Corps supplies may now obtain specifications for any item from either of three following central agencies instead of having to deal with the agency procuring a particular article: QM Procurement Agency, 111 E. 16th St., New York 3; Chicago QM Depot, 1819 W. Pershing Rd., Chicago 9; Oakland QM Procurement Agency, Oakland Army Base, Oakland 3, Calif.

The Point of Purchase Advertising Institute, 16 E. 43rd St., New York, has announced that reservations are now open for the **1951 POPAI Exhibit and Symposium**, to be held April 3 and 4 at the Waldorf-Astoria Hotel, New York. Setting of this early date for reservations will enable prospective exhibitors to save time and plan in advance for the show. Membership in POPAI is required of all exhibitors and a $100 down payment on each booth is required at the time of reservation, the balance payable any time before Feb. 1, 1951. Reservation blanks have been sent to all members.

The first showing of POPAI's new sound-slide-film, "Eye Catchers Are Sales Catchers, the Story of How Advertising at the Point-of-Purchase Increases Your Sales," was held last month. Said to be the first film ever made of the industry as a whole, it emphasizes point-of-purchase advertising as the final important link in the advertising-selling chain.

The Toilet Goods Assn., Inc., has announced the judges for its annual packaging award, the Charles S. Welch Memorial Award, as follows: **Miss Julia Coburn**, director, Tobe-Coburn School for Fashion Careers; **Mrs. Fleur Cowles**, editor, *Flair* magazine; **J. S. Holliday**, toilet-goods buyer, Joseph Horne Co.; **John W. McPherrin**, editor, *The American Druggist* magazine; **L. C. Shockley**,

What's Doing

Dec. 27–28—**American Marketing Assn.**, conference, Waldorf-Astoria, New York.

Jan. 15–18—**American Society of Mechanical Engineers** and **Society for the Advancement of Management**, second national Plant Maintenance Show, Cleveland Auditorium, Cleveland.

Jan. 18–20—**Society of Plastics Engineers**, seventh annual national technical conference, Hotel Statler, New York.

Jan. 23–25—**National Macaroni Mfrs. Assn.**, convention, Flamingo Hotel, Miami Beach, Fla.

Jan. 29–31—**American Pharmaceutical Mfrs. Assn.**, Eastern Section, convention, Hotel Roosevelt, New York.

Jan. 29–31—**National Dairy Council**, convention, President Hotel, Kansas City, Mo.

For Your Information
(Continued)

director of sales and advertising, McCrory Stores Corp.

The rules governing the award have been slightly revised this year to cover two awards, namely, an award for the most outstanding package retailing at $1 or less and an award for the most outstanding package retailing at more than $1. Bronze plaques will be presented to the winners at the annual TGA convention in May.

Deadline for the entries in the **1951 Carton Competition,** held by the **Folding Paper Box Assn. of America,** is Dec. 31. All entries should be sent, together with entry blanks, to: 1951 Carton Competition, Czarnowski Display Services, 732 N. Morgan St., Chicago.

The Competition is separated into five major classifications. Awards in each classification will be determined by the following four panels of experts not directly connected with any member company. **Louis Cheskin,** Color Research Institute of America; **Robert Sidney Dickens,** Robert Sidney Dickens Co.; **Raymond Loewy,** Raymond Loewy Associates, will judge Class A, "Best Artistic Design." A second panel of printing specialists consisting of **Robert H. Middleton,** art director, Ludlow Type Co.; **Burton Cherry,** art director, Cuneo Press; **Walter Howe,** art director, R. R. Donnelly & Sons Co., will judge Class B, "Technical Superiority of Printing." A third panel of experts in the field of carton construction consisting of **Charles A. Southwick, Jr.,** MODERN PACKAGING; **Harry Stevenson,** retired; **Jack Hollander,** designer, will judge Class C, "Technical Superiority of Construction." The fourth panel, which will include editorial, sales and merchandising authorities consisting of **W. P. Lillard,** sales promotion manager, General Foods Corp.; **Lloyd Stouffer,** editor, MODERN PACKAGING; **John Knight,** editor, *American Boxmaker;* **George Hamilton,** representing Boxboard Containers and *Packaging Parade;* **George Pisani,** W. B. Ford Design Corp., will judge both Class D, "Best Example of Potential New Volume Use for Paperboard" and Class E, "General Superiority According to End Use." The Grand Award, as usual, will be determined by vote of the official representatives present at the 1951 annual meeting and will be chosen from the Award Winners selected by the judges.

A major expansion of the public relations program of the Folding Paper Box Assn. of America has been approved

For Your Information

(Continued)

by the association's board of directors. This action broadens the scope of the association's public relations in two principal fields: first, the production of a motion picture and, second, a refinement of the rules and enlargement of the scope of the association's present Carton Competition.

Dave Chapman, Chicago designer, has been elected president of the **Society of Industrial Designers** for the coming year, succeeding **Egmont Arens** of New York. Other newly elected officers are **Viktor Schreckengost** of Cleveland, vice president; **Robert Hose** of New York, secretary; **A. Baker Barnhart** of New York, treasurer.

Variety Merchandiser, business magazine of the chain variety-store field, announces it is now accepting entries in its **15th Annual Packaging Contest** for new or redesigned 1950 packages. Entry blanks may be secured from the magazine's offices at 192 Lexington Ave., New York.

The Island Equipment Corp. has just published a series of drawings of its unscrambling tables to aid production managers, engineers, etc., in making layouts of production lines on which they plan to use an unscrambling table. The drawings, first in a series planned for giving better service to prospects for conveying equipment, may be obtained from the company, 27-01 Bridge Plaza N., Long Island City 1, N. Y.

The newly organized **Packaging Assn. of Canada** announces election of the following to the association's board of directors: **M. H. McArthur,** The Hinde & Dauch Paper Co. of Canada, Ltd.; **C. W. Stephens,** Dominion Paper Box Co.; **C. R. Cornell,** *Canadian Packaging* magazine; **F C. Hayes,** Container Statistics, Ltd.; **C. C. Callowhill,** American Can Co.; **J. P. Gledhill,** Dominion Foils (Canada), Ltd.; **C. Gordon Rolph,** Rolph-Clark-Stone, Ltd.; **Earle Williams,** Delamere & Williams Co.; **R. B. Graham,** Aluminum Co. of Canada, Ltd.; **B. V. Schaub,** National Adhesives (Canada), Ltd.; **K. W. Malcolmson,** Canada Foils, Ltd.; **F. C. Lennox,** Somerville, Ltd. Mr. Hayes has been named managing director of the association, with offices at 916 Yonge St., Toronto.

Fifty-five specific problems and their solutions in present-day marketing, covering packaging, branding and labeling, merchandising methods, consumer and sales research, etc., are presented in a

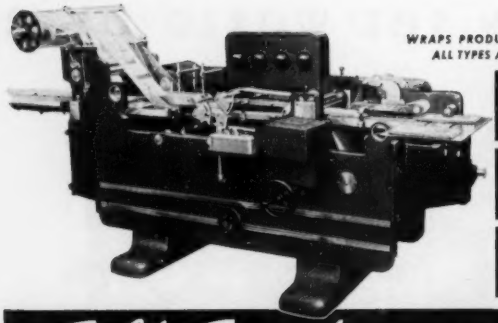
new book by **Hector Lazo,** Ph.D., of the Graduate School of Business Administration, New York University, titled **"Case Histories of Successful Marketing"** (Funk & Wagnalls Co. in association with Printers' Ink Publishing Co., New York; $4.75). Five sections dealing with packaging cover cutting installation costs, package changes capture the market, special packages for special purposes, improved packages as powerful sales stimulants and designing packages for a family of products.

A comprehensive but compact survey of the materials, processes, products and equipment of the plastics industry is contained in a new book edited by **William Schack** and titled **"A Manual of Plastics and Resins in Encyclopedia Form"** (Chemical Publishing Co., Inc., Brooklyn, N. Y.; $10). The publication contains some 1,500 subjects arranged in alphabetical order for ready reference. An appendix lists trade names of plastics, their composition and their manufacturers.

Recently off the press is the sixth edition of **"Publicite et Arts Graphiques,"** edited by **Maurice Collet,** 4, Rue Daubin, Geneva, Switzerland. Designed to present a survey of the evolution of advertising art, this fine volume is a beautifully presented documentary of the efforts made in the past two years by advertising designers and agents, publishers, printers and producers in an attempt to gain recognition for their most interesting, original and striking works. Of particular interest to our industry are sections on packages and on labels. Almost all of the 188 pages of this artistic publication are dramatically illustrated.

The Forest Products Research Society, Madison, Wis., has announced plans for an international meeting of all forest products interests to be held in Philadelphia in May. Among the organizations participating in the meeting are the Wood Industries Division of the American Society of Mechanical Engineers, the Society of the Plastics Industry, the Society of American Foresters, the American Society for Testing Materials and the Northeast Wood Utilization Council. Clearing house for convention arrangements is at 2 Columbus Circle, New York 19.

A 24-page booklet titled "A Simplified Guide to Bakelite and Vinylite Plastics and Resins" has been published by the **Bakelite Division, Union Carbide & Carbon Corp.** It classifies the various forms of Bakelite phenolic, styrene, polyethylene and Vinylite plastics and resins, describing in simple terms the general characteristics and properties of each. Typical applications are shown in 126 illustrations. Copies may be obtained from the company, 300 Madison Ave., New York.



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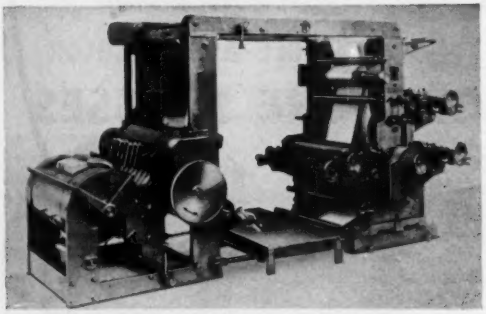

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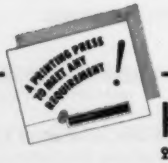

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To obtain any of the booklets or catalogs listed below, simply circle the corresponding number on the post card, fill in the information requested, and mail.

WOOD GLUE. Described are the characteristics and advantages of Polyco polyvinyl resin glues for use in assembling silver chests, cabinets, and other jointed wooden structures. 4 pages. American Polymer Corp. (12-50)

BUSINESS FORM PRESSES. Specialized presses for high-speed printing of business forms by offset rubber plate or stereotype are described. 4 pages. Webendorfer Div. American Type Founders. (12-51)

STEEL DIE BENDER. Description and illustration of the Excel front head action bender for form steel cutting dies are contained in this 4 page folder. J. A. Richards Co. (12-52)

HAND OPERATED HEAT SEALER. Sheet containing list of sealable materials, operating speed, and features of the Sullivan heat sealer, which incorporates a device for trade mark embossing and date coding. Sullivan Heat Sealing Equipment Co. (12-53)

HEAT ACTIVATED PAPER. Description of the advantages of Pervenac heat seal stock for printing labels for pots, home appliances, stainless steel, copper, and other products. Includes printing and varnishing tips. Nashua Gummed and Coated Paper Co. (12-54)

LIQUID FILLING EQUIPMENT. Three liquid filling machines, which are fully automatic or semi-automatic and use the gravity and vacuum methods, are described in this 4 page illustrated folder. MRM Co., Inc. (12-55)

FOOD PACKAGING SCALES. Illustrated 6 page folder showing applications of various Exact Weight scales in the packaging of a wide variety of food products. The Exact Weight Scale Co. (12-56)

COATING MACHINE. A machine for applying lacquer, paint, varnish, japan, and other coatings to various sheet materials at high speeds is described in this illustrated 4 page folder. Rutherford Machine Div., Sun Chemical Corp. (12-57)

SANDWICHES IN CELLOPHANE. Two efficient methods for wrapping triangular sandwiches in heat sealing cellophane are included in a folder which also lists the advantages of using this material. British Cellophane, Ltd. (12-58)

STRAINERS AND FILTERS. Specifications and illustrations of Kraissl basket separators which strain and filter undesirable impurities from fluids by passing them through fine mesh screens. The Kraissl Co. Inc. (12-59)

POLYETHYLENE. 24 page booklet which contains a complete description of Bakelite polyethylene including listings of all important characteristics and description of methods for fabricating. Bakelite Div., Union Carbide and Carbon Corp. (12-60)

CAN LABELING. Helpful information on selecting a can labeling glue, a can labeling method, and on avoiding labeling difficulties. 24 pages. National Adhesives, Div. of National Starch Products Inc. (12-61)

COLLATING MACHINE. Description and specifications of an automatic machine for collating bundles of folded papers. The John G. Herrmann Co. (12-62)

PHARMACEUTICAL EQUIPMENT. The features, specifications, illustrations, and other information on various automatic machines for washing, filling, and sealing of ampuls and vials. 6 page brochure. Popper and Sons. (12-63)

LABELING ADHESIVE. Laboratory report on Paisley No. 1707 synthetic latex-resin emulsion for pasting labels to tin plate, terne plate, varnished and enameled surfaces. Paisley Products, Inc. (12-64)

FLOCK FIBERS. Booklet covering advantages and applications of regular and Tufkote Behrlon rayon fibers. Contains color card of flock samples. Behr-Manning. (12-65)

TEKWOOD. Described in this folder is a hardwood core laminated board for fabricating into shipping containers, boxes, and other packages. 4 pages. United States Plywood Corp. (12-66)

CAN MAKING MACHINES. Description of machines for making metal cans of various sizes and shapes is included in this folder which also illustrates many accessories. 12 pages. Lima-Hamilton Corp. (12-67)

POLYSTYRENE. Covered in this folder are the properties of six types of Koppers polystyrene. 4 pages. Koppers Co., Inc. (12-68)

PRODUCING VACUUM IN CANS. Thorough discussion of the merits of three important methods of producing vacuums in metal cans. 14 pages. Continental Can Co., Inc. (12-69)

INFORMATIVE LABELING. Covered in this 4-page folder are various methods for imprinting size and code information on boxes of various sizes. Markem Machine Co. (12-70)

PACKAGING LABORATORY SERVICE. This illustrated booklet takes the reader behind the scenes and shows how protective shipping containers are developed in the laboratory. The Hinde & Dauch Paper Co. (12-71)

POLYTHENE FOR PAPER COATING. Technical manual covering the properties, uses, and techniques for "Alathon" polythene resins for coating papers and other specialty applications. 35 pages. E. I. du Pont de Nemours & Co., Inc. (12-72)

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PACKAGE MACHINERY SERVICE. Leaflet tells how Package Machinery Company's service can help solve many packaging problems. 4 pages. Package Machinery Co. (12-73)

TRUFECT PAPER. Illustrated booklet presenting the Level-coat paper Trufect, which is reported to give added beauty to photographs without extra cost. Kimberly-Clark Corp. (12-74)

MARKING MACHINES. Descriptions and illustrations of seventeen marking and code-dating machines for imprinting, indenting, embossing, etching, and hot-stamping containers, labels, parts and products. 8-page catalog. Adolph Gottscho, Inc. (12-75)

SET-UP BOXES. This illustrated 14-page brochure describes set-up box structure, specialty boxes, advantages of trade name set-up boxes, and suggestions on color, design, and print. 6 pages illustrate and describe various set-up boxes now in use by leading manufacturers. National Paper Box Mfrs. Assn. (12-76)

MATCHED WRAPPING AND BAGS. This illustrated brochure presents the features and advantages of using "Broad-Glass" matched wrappings and bags. Samples are included with information on each. Thilmany Pulp and Paper Co. (12-77)

RUBBER STAMPS. Complete specifications and illustrations of each stamp and its marking are given in this folder on rubber stamps produced by the Industrial Marking Equipment Co. (12-78)

CELLOPHANE WRAPPER. This illustrated bulletin describes the operation, gives complete specifications, and mentions other pertinent data on the May-Flex wrapper. Floor plans are included. Wright Machinery Co. (12-79)

WATERPROOF BAGS. Various types of taped tops, printed bags, and seams on waterproof bags are illustrated and described in this 12-page booklet. Descriptions are given of different types of packaging problems that can be solved by the use of waterproof laminated textile bags produced by Bemis Bro. Bag Co. (12-80)

PAPER PACKAGING MACHINES. This folder gives the specifications, features, and other important data on the Morpac paper packaging machine for packaging such things as ream paper, tablets and pads, looseleaf fillers, school and all varieties of bound books and most rectangular objects within its wrapping size range. Lynch Corp. (12-81)

PRODUCT DISPLAYS. A reprint from the 1947–48 issue of MODERN PACKAGING ENCYCLOPEDIA, this illustrated leaflet contains various helpful display ideas. Forbes Lithograph Co. (12-82)

SCREW CAPPING MACHINE. Specifications, features, and other important data are given concerning this Elgin screw capping machine which is semi-automatic with automatic feed. A list of Elgin Equipment is also presented. Elgin Mfg. Co. (12-83)

METERING FILLER. Compact filler for coffee, cereals, powder and other free flowing fluids which accurately meters the products in any volume weight from milligrams to ten ounces. Weigh Right Automatic Scale Co. (12-84)

TABLET AND PILL FILLING MACHINE. Specifications, illustration, features, and operational data on the Model TBS, used for counting and filling tablets and pills, are given in this bulletin. U. S. Automatic Box Machinery Co., Inc. (12-85)

PRECISION LABELING. Specifications, diagrams, features, illustrations, and various other information is included in this 12-page booklet on various labelers as produced by Pneumatic Scale Corp., Ltd. (12-86)

BAG CLOSING EQUIPMENT. Three Hoepner sewing heads and various other bagging equipment are discussed in this four-page illustrated booklet with specifications on each. Consolidated Packaging Machinery Corp. (12-87)

THERMOPLASTIC LABELER. The Pony Label-Dri, used for applying thermoplastic paper, cloth, or foil labels to glass, metal, wood, plastic, textiles, and cellophane is illustrated and discussed in this 4-page leaflet. New Jersey Machine Corp. (12-88)

COLOR GUIDE. This 21-page color guide shows color specimens with IPI order numbers and also the specifications and description of each color in accordance with the American Standards Association. International Printing Ink Div., Interchemical Corp. (12-89)

AUTOMATIC FLANGE BENDERS. Specification sheet and description of a machine which automatically bends the flanges of box blanks during the box making operation. M. D. Knowlton Co. (12-90)

AMPULS. Made of chemically resistant Kimble Neutraglas, featuring both "Tuf-Top" and trimmed stem varieties. Illustrated brochure lists specifications. Kimble Glass. (12-91)

STEEL CONTAINERS. Presentation to the industry of the Rheemoote drum—the first completely lithographed and inner roller coated 55-gallon steel drum. Illustrated in full color. Rheem Mfg. Co. (12-92)

1951 MODERN PACKAGING ENCYCLOPEDIA. The contents of the new MODERN PACKAGING ENCYCLOPEDIA including sections on "How to Use Packaging to Boost Sales" and "How to Use Packaging to Cut Your Costs" are described in detail in an illustrated folder. Packaging Catalog Corp. (12-93)

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U.S. Patents Digest

Edited by H. A. Levey

This digest includes each month the more important patents of interest to those who are concerned with packaging materials. Copies of patents are available from the U. S. Patent Office, Washington, at 25 cents each in currency, money order or certified check; postage stamps are not accepted.

Folding Cardboard Box, H. S. Blandford (to Medina Business Estate, Elmira, N. Y.). U. S. 2,522,597, Sept. 19. A blank comprising a central section, side sections formed along side edges of central section, side sections having slits formed intermediate their ends disposed at oblique angles with respect to edges of side sections and having tables which lock into slits.

Method and Apparatus for Packaging Loose, Flowing Commodities, H. P. Lewis, (to Wm. S. Scull Co., Camden, N. J.). U. S. 2,522,682, Sept. 19. Apparatus, for forming packages of a loose, flowing commodity comprising a substantially vertical hollow feeder mandrel, means to supply a continuous, uniform flow of the commodity to upper end of mandrel and means to advance continuously a flexible tube of packaging material downwardly about said mandrel.

Sterile Sifter Package for Pharmaceuticals Which may Be Injured by Heat, M. R. Fields (to Abbott Laboratories, North Chicago, Ill.). U. S. 2,522,708, Sept. 19. A pharmaceutical package comprising a sterilized cylindrical inner container embodying a fibreboard tube and metal-end closures therefor, said end closures being in the form of cup-shaped members having transverse end-wall portions and cylindrical side-wall portions frictionally fitting in end portions of tube.

Box Hole Closure, M. D. Bergan (to the Thomas & Betts Co., Elizabeth, N. J.). U. S. 2,522,741, Sept. 19. A wall provided with an opening of circular outline, a pair of identical disks for closing the opening, one disk disposed on one side and the other on the opposite side of wall, each of said disks provided with the same number of raised bosses arranged radially and circumferentially spaced apart distances at least equal to their circumferential dimensions.

Sealed Container, W. Rabak, Berkeley, Calif. U. S. 2,522,961, Sept. 19. A container having a cover with a surrounding flange and an interrupted severance line with contacting edges through the wall of cover and forming a flap integrally hinged to wall and inherently holding flap at an incline to the plane of cover; a thermosensitive plastic coating overlying the surface of wall and severance line for sealing.

Bottle Holder and Carrier, G. M. Acton (to Acton Mfg. Co., Inc., a corporation of Kansas). U. S. 2,522,978, Sept. 19. A bottle holder for use with automatic bottle-case unloaders including a bottom, upper spacer member above the bottom, upper spacer having a plurality of apertures for receiving and substantially engaging bottles, a lower spacer member intermediate the upper space and bottom, lower spacer having apertures in alignment with apertures in upper spacer, a handle having spaced portion slidably mounted in upper spacer.

Automatic Tablet-Counting and Bottle-Filling Machine, G. V. Cremioux, Orange, N. J. U. S. 2,523,098, Sept. 19. An automatic tablet-counting and bottling machine comprising a frame having a downwardly and forwardly inclined top portion, a counting board having a plurality of counting channels removably mounted on frame, a hopper adjustably mounted on frame over counting board to receive a quantity of tablets to be counted and bottled.

Folding Carton, V. R. Pantalone (to National Folding Box Co., Inc., New Haven, Conn.). U. S. 2,523,246, Sept. 19. An end closure for a folding carton having four enclosing body walls hingedly connected along side fold lines, end closure comprising two end panels hingedly connected to two opposed body walls along end fold lines.

Folding Carton, V. R. Pantalone (to National Folding Box Co., Inc., New Haven, Conn.). U. S. 2,523,250, Sept. 19. A display container made from a single blank of foldable board forming a substantially square box in closed condition and a triple-tier display stand in open condition, container comprising a body portion including bottom wall, front wall, rear wall twice the height of the front wall, and side walls having a rectangularly recessed top edge adjacent the front wall, recess being equal in height to one third the height of the back wall and having a tray in the bottom.

Round-Cornered Folding Box, V. R. Pantalone and M. I. Williamson (to National Folding Box Co., Inc., New Haven, Conn.). U. S. 2,523,251, Sept. 19. A round-cornered folding box particularly suited as a soap shell, the box comprising two opposed end panels, two opposed side-wall panels hingedly connected to end panels along end fold lines.

Reclosure Container, G. C. Erb (to American Can Co., New York, N. Y.). U. S. 2,523,285, Sept. 26. A reclosure container comprising a tubular body having an inwardly projecting peripheral bead and an end member secured to said body in an end seam, said end member adjacent seam having an inwardly extending substantially planar annular wall adapted to be severed by a cutting tool to open container; when cut the turned-back peripherally severed edges of end member annular wall provides a smooth plug reclosure member, supported by body bead.

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Closing Packets, R. W. Hoag, Melrose, Mass. U. S. 2,523,431, Sept. 26. The method of filling, closing and severing a web of packet elements to provide individual packet units, consisting in convolutely rolling a web of empty packet units having flutes parallel with the axis of the roll and with the flutes closed on one side of the roll and open on the opposite side of the roll, and positioning the roll of packets to be horizontally rotatable about its center and with the open end of the flutes facing upwardly, and pouring commodity to be packed in open ends of web flutes.

Folding Box, M. I. Williamson (to National Folding Box Co., Inc., a corporation of Connecticut). U. S. 2,523,488, Sept. 26. A carton blank of fibrous board for tight sealing folding cartons comprising wall panels hingedly connected along side fold lines and end flaps connected to said wall panels.

Packaging Machine, C. E. Palmer and F. J. Kostohryz (to Frank D. Palmer, Inc., a corporation of Illinois). U. S. 2,523,667, Sept. 26. In an apparatus of this type a receiver adapted to receive in upright position a filled open-topped receptacle, an arm pivotally mounted at one end having receiver pivotally mounted in other end and means for effecting rocking of said arms and means for applying box section to discharged package content, receptacle to thereby effect enclosure of content in a slip-cover box.

Carton Gluing and Closing Machine, T. E. Piazze (to Shellmar Products Corp., Chicago, Ill.). U. S. 2,523,718, Sept. 26. In a machine for closing and gluing together the inner and outer extension flaps of a carton horizontally disposed on a mandrel to provide a bottom closure thereof, the improvement comprising in combination mechanism for simultaneously inwardly folding said inner flaps, mechanism for applying glue to both surfaces of one of outer flaps transversely of the longitudinal axis of carton when the latter is in horizontal position.

Carrier for Chimed Cans, T. W. Foster (to Container Corp. of America, Chicago, Ill.). U. S. 2,523,985, Sept. 26. A collapsible paperboard carrier comprising a tubular member defined by top, side and bottom walls and adapted to receive a row of cans having at least one chime-type closure and having a handle hingedly related to the top wall.

Carrier for Tapered Cans, T. W. Foster (to Container Corp. of America, Chicago, Ill.). U. S. 2,523,986, Sept. 26. A collapsible holder adapted for use with tapered-top cans of predetermined height and diameter, said holder being formed of foldable paperboard comprising a bottom wall adapted to hold a row of cans, a top wall, side walls hingedly connected to edges of top and equipped with handle.

Carton-Flap Opening Mechanism. T. E. Piazze (to Shellmar Products Corp., Chicago, Ill.). U. S. 2,523,719, Sept. 26. In a machine for handling containers of type wherein an inner liner is located

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U.S. Patents Digest

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within an outer reinforcing carton having oppositely disposed closure flaps, the improvement comprising in combination, vertically reciprocable mechanism adapted to engage the marginal portions of two of said oppositely disposed closure flaps, to spread them outwardly and downwardly away from liner in an out-of-the-way position, said entire mechanism moving in a path outside the inner confines of the carton walls.

Nursing Container, W. J. Rigby and T. R. Baxter (to Shellmar Products Corp., Chicago, Ill.). U. S. 2,524,021, Sept. 26. A nursing unit comprising a flexible disposable container body, a flanged nipple and cooperating clamping members for securing top portion of container body in sealed relation with nipple flange.

Method of Closing Bag-Tube Ends, H. H. Allen (to Bemis Bro. Bag Co., Minneapolis, Minn). U. S. 2,524,030, Oct. 3. A method of closing and sealing an open bag top, which consists in pressing walls of open bag end into flatwise relation with edge wall intucked between side walls, thereby to provide an outwardly facing recess at each bag top, said bag having a flexible-walled bag body with side-wall portions in collapsed flatwise relation with intucked walls.

Sealing Method for Cartons, L. Back (to The Interstate Folding Box Co.). U. S. 2,524,032, Oct. 3. A method of sealing flaps at the end of a carton body, which includes as separate stages of folding adhesively securing the folding in of a pair of opposite flaps and the adhering of another flap thereto while said flaps are supported by a plate extending across the carton end.

Device for Forming Paper Boxes, J. F. Pagendarm (to Bemiss-Jason Co.). U. S. 2,524,132, Oct. 3. In a device for interlocking the two ends of a box blank with each of the two sides, a first pair of spaced parallel rollers for pushing the sides in and toward each other, a second pair for pushing ends toward each other.

Carton, R. Guyer (to Waldorf Paper Products Co., St. Paul, Minn.). U. S. 2,524,441, Oct. 3. A carton comprising a series of side walls foldably connected together, two opposed side walls being formed of two panels extending throughout their width in surface-contacting relation and adhered together in length.

Shipping and Display Box, R. J. Cody (to Federal-Mogul Corp., Detroit, Mich.). U. S. 2,524,516, Oct. 3. A shipping, storage and display carton comprising a box having four vertical side walls arranged generally in the form of a rectangle; horizontal bottom sections attached to bottom edges of one pair of opposite side walls along fold lines, each of which bottom sections extends approximately one fourth the distance across said box, having upstanding partition sections fixed to inner edges of bottom along fold lines.

Bottle Carrier, A. E. Cole (to National Folding Box Co., Inc., New Haven, Conn.). U. S. 2,524,517, Oct. 3. A bottle carrier and display device comprising a

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U.S. Patents Digest

(Continued)

central substantially vertical member of at least double-ply thickness, plies being hingedly connected along a side edge.

Crown Closure Lining Machine, D. L. Shanklin and R. P. Stockes (to Dewey & Almy Chemical Co., North Cambridge, Mass.). U. S. 2,524,545, Oct. 3. In a machine for lining closures, the combination of a plurality of rotary chucks, a lining-compound applying nozzle associated with each chuck and a needle movable therein to open or close its outlet.

Method and Machines for Filling Containers with Powdered Material and for Removing Dust and Airborne Particles at Region Ambient the Container, O. E. Cote (to United States Automatic Box Machinery Co., Inc., a corporation of Massachusetts). U. S. 2,524,560, Oct. 3. The method of filling with loose dry material top-opening impermeable tubular containers of self-supporting rigidity, which comprises presenting above the container a tubular fill spout of substantially less diameter than the container, relatively telescoping the spout within the container to a position near the container bottom while maintaining an open-end cylindrical space directly between spout and container wall.

Container, J. P. Carroll (to American Can Co., New York, N. Y.). U. S. 2,524,766, Oct. 10. A liquidproof fibre container for liquids comprising a tubular fibre body and an end-closure member secured to folded portions of body.

Bag-Filling or Packing Machine, J. E. Socke and L. H. Weber (to American Can Co., New York, N. Y.). U. S. 2,524,846, Oct. 10. In a packing machine for loading bags or other containers with unit layers of arranged articles, the combination of a bag support for holding a bag in open position, a loading device having a plurality of vacuum cups movable into a bag on bag support for gripping and deposing unit layers of articles into the bag individually and pin parallel zones until bag is filled.

Bottle Packaging Machine, J. Cattonar and G. Olm (to Edward Ermold Co., New York, N. Y.). U. S. 2,524,880, Oct. 10. In a packaging machine, the combination of a pair of jaws, a support for same, a pivot shaft for one end of each jaw on support, a cam plate having cam grooves disposed within the jaws, positive means on each jaw acting on plate in the groove thereof, and spring-pressed balls at tip of jaws for providing a four-point contact with the bottle.

Self-Adjusting Sack Holder and Filling Valve, L. B. Berg (to Robert Wilson Carter, Luling, Tex.). U. S. 2,525,113. In combination with a receptacle having a discharge opening through which material contained in said receptacle is discharged therefrom, a structure for controlling passage of material through said discharge opening.

Cell-Type Carton, C. H. Goodyear (to Fibreboard Products, Inc., San Francisco, Calif.). U. S. 2,525,125, Oct. 10. A lidless tray and cell-type carton comprising

U.S. Patents Digest

(Continued)

a bottom, spaced side walls and spaced end walls, both vertical with respect to said bottom.

Pouch-Making Machine, H. W. Ligon (to Atlanta Paper Co., Atlanta, Ga.). U. S. 2,525,139, Oct. 10. In a pouch-making machine, in combination, a plurality of strips associated to form the geometrical outlines of a plurality of pouches, means to heat said strips, means to press a sheet, comprising a plurality of layers of material adherent when heated and each in the form of a continuous web, against said strips.

Carton Structure, A. S. Napier, St. Paul, Minn. U. S. 2,525,268, Oct. 10. A carton lock for connecting a panel to a pair of panels connected along a fold line, the lock comprising a pair of similar generally triangular sections on opposite sides of the fold line.

Inks, A. Voet (to J. M. Huber Corp., Locust, N. J.). U. S. 2,525,433, Oct. 10. An ink consisting essentially of a water-miscible neutral aliphatic solvent containing from two to eight carbon atoms in which lignin is soluble to the extent of at least 5% by weight and a pigment from about 2% to 60%, based on weight of solvent.

Label-Applying Mechanism, G. W. von Hofe and H. A. Nefzger (to New Jersey Machine Corp., Hoboken, N. J.). U. S. 2,525,504, Oct. 10. In a labeling machine, the combination of an article-supporting means, means for partially securing a label to an article and means for removing article from supporting means.

Package for Electrical Devices, W. A. Heinrich (to James R. Kearney Corp., St. Louis, Mo.). U. S. 2,525,673, Oct. 10. A package for an electrical device having a bushing extended upwardly from upper portion of casing thereof, package comprising a frame structure which is adapted to be assembled with the electrical device at upper portion thereof in such manner that frame structure embraces bushing of electrical device.

Collapsible Compartmented Carton With Handle, M. H. Kowal (to Empire Box Corp., Garfield, N. J.). U. S. 2,525,686, Oct. 10. A folding compartmented carton of foldable sheet material with side and end walls foldably connected together with a center divider wall comprising two plies and having a vertical extension forming a handle.

Label Activating and Applying Apparatus, G. W. von Hofe, E. E. Lasko and A. S. Chandler (to New Jersey Machine Corp., Hoboken, N. J.). U. S. 2,525,741, Oct. 10. In an apparatus for activating a series of sheets having normally inactive but thermoactivatable adhesive coatings, a continuously rotating drum having means for holding sheets effective at the peripheral surface thereof and adapted to transport a plurality of said sheets in a spaced series from a pick-up station and means for heating drum surface so that sheets arrive at discharge station in activated state.

Impact-fatigue test—

(*Article continued from page 135*)
continues to stretch and never regains its former dimension. Finally, the paper appears to be so weak that the final impact causes failure by a combination of bursting and tearing stresses.

A close study of bags undergoing a drop test reveals a somewhat similar sequence of events. True, the stresses are not applied in exactly the same manner, but the end results appear to be similar. Usually the weakest point in a bag is the gusset crease made on the bag machine; consequently, many breaks appear here first. A bag that has not broken in a drop test but is so weak that one more drop will cause a break usually has a pinhole. The next drop will probably result in a break. This occurs because the paper tears, starting at the pinhole.

After examination of the characteristics brought into play in the drop test it becomes evident that fatigue in the paper is of vital importance. With the exception of the folding test, this quality is not measured by any of the more common paper tests now used. The factor of fatigue is taken into consideration by the impact-fatigue tester and may account for the good correlation between this test and the drop test.

Some work remains to be done on the test to reduce the spread in the results. However, the results presented in the various tables indicate that the basic concept of delivering repeated impacts to a sheet of paper is a valid paper test. It appears to predict with fair accuracy the performance that may be expected of a bag made from the paper.

Appendix

TEST METHOD—**Impact-fatigue of paper.**

Scope. The impact-fatigue test is a simple method of testing paper to predict how well bags from the paper will perform in drop and shipping tests.

Apparatus. Impact-fatigue tester.

Test specimens. The test specimens shall be representative of the entire lot of material. They shall be conditioned and tested in an atmosphere of 73 deg. F. and 50% relative humidity.

Procedure. Level the instrument. Adjust the height of the fall to obtain

Kimble Opticlear Vials come in eight popular sizes

How to give your product added prestige

Kimble Opticlear Vials with their sparkling clearness, their uniform walls and graceful contours reveal and emphasize the high quality of the products they protect.

Then too, there are the attractive, new plastic stoppers which seal your product safe from moisture and contamination. Even after these have been removed and replaced repeatedly, reseal is quick and positive. Examine some Kimble Opticlear Vials. Tell us sizes and we will send samples.

Specify Kimble for assurance of container quality

KIMBLE GLASS TOLEDO 1, OHIO
Division of Owens-Illinois Glass Company

average results not less than 15 and not more than 50 impacts. The specimen shall be clamped firmly in position, after which the impacts shall be applied by means of the falling balls. Observe the specimen and stop the test at the first sign of a rupture or break in the paper. Count the number of impacts required to break the paper. Repeat the test a sufficient number of times to arrive at a reliable average. A minimum of 20 individual tests is recommended.

Report. (1) Give the height of the fall. (2) Specify the weight and diameter of the balls used. (3) Give the average number of impacts required to break the paper.

USAF packaging

Manufacturers selling to the Air Force now are required to package at least 50% of supplies in containers designed for overseas shipment, the Supply Division, Air Material Command, USAF, has announced. This new policy, which applies to many supply items, has been adopted to speed up delivery of overseas shipments and minimize handling at AMC supply depots.

Previously, manufacturers and AMC depots were required to pack for overseas shipment only quantities of items anticipated or known to be destined for overseas. Consequently, the large volume of overseas orders in the corrosion-control, packaging and packing branches at AMC supply installations have been taxed to keep exports on a current basis. To alleviate this, the Supply Division adopted this policy whereby a minimum of one-half of a group of specified items, spares and parts will be packaged for overseas shipment. In addition, where USAF consumption warrants, the percentage of items packed for overseas shipment is increased to a point consistent with anticipated requirements.

Included in the aeronautical items, spares and parts coming under the Supply Division's request are aircraft components, aircraft engines, accessories, spare parts, aircraft armament, bearings, airborne and ground-installation types of communications equipment and spare parts, ground-installation handling equipment and special tools. Each section of the Supply Division will determine the appropriate percentage of common items—hardware, clothing, etc.—required to be packed in overseas containers.

Aluminum controls

Confusion concerning NPA restrictions on the use of aluminum was clarified to some extent by rulings and interpretations issued in the latter part of November.

The basic Order M-7 in effect sets aside 35% of aluminum production for military use and stockpiling. Effective Jan. 1, it restricts non-defense uses of aluminum in each quarter to 65% of quarterly consumption averaged over the first two quarters of 1950. The manufacturer is forbidden to use more than 40% of his quarterly allowance in any one month.

The order is on a weight basis and does not attempt to regulate end uses within the restriction.

If a packager, for example, used 100,000 lbs. of aluminum in the average first-half quarter of 1950, he can use 65,000 lbs. in each quarter of 1951, and in any form he likes, whether foil, collapsible tubes, rigid containers or closures. This suggests the possibility in some cases of making the allotment go farther by using lighter gauges, where it is found to be practicable.

Any person who used an abnormally small amount of aluminum during the base period, or started business after June 30, may appeal for relief.

Some small packagers will benefit from a clause which exempts from the order all persons using less than 1,000 lbs. of aluminum during any period of 12 consecutive months.

Exempted also, of course, is all aluminum required to fill a DO order under NPA Regulation 2, or any other mandatory NPA order; for these purposes aluminum will be provided over and above the 65% limitation.

In general, the responsibility is on the end user of the aluminum rather than the supplier.

In the case of aluminum collapsible tubes, however, the Toilet Goods Assn. obtained an interpretation which holds that the restriction is on the tube manufacturer, who must limit his use of the metal to the 65% level, leaving the packager free to use as many tubes as he can obtain. Under the prevailing system of voluntary allocation by tube suppliers, however, the effect will be about the same.

If the above interpretation is logically extended, it may apply to all converted forms of aluminum packaging—placing the burden on the converter rather than the user.

Swift's Adhesives help you

. . . and Junior, too!

Junior doesn't know it, but when he sneaks into the pantry for snacks he's liable to meet Swift's many adhesives, too. Among the hundreds of Swift's Adhesives, there are special ones for packagers, for bottlers and for bookbinders. Our years of adhesive experience, our wide range of raw materials can help *you* find the adhesive that fits your requirements . . . and lowers your operating costs.

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1262—*Liquid adhesive for top and bottom sealing and titewrap work.* A fast-setting, non-warp adhesive, easy to handle. Provides a strong bond.

Textite—*For quality setup box work.* In convenient cake form—it is non-warp and light colored for finest work. Economical because of its better coverage resulting in lower final cost.

Test these adhesives at quantity price! Clip the coupon!

Call SWIFT first for ADHESIVES

Swift & Company
Adhesive Products Department
Chicago 9, Illinois

Please send your 100# introductory trial shipment of

- ☐ 1262 at the quantity discount price, FOB nearest adhesive plant.
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These will be tested for use in our operations. We understand if not fully satisfactory, they may be returned for credit at your expense.

Name _____ *Title* _____

Firm Name _____

Address _____

This offer expires Feb. 28, 1951. MP-9a

More mileage—

(*Article continued from page 82*)
if everybody eliminates wasteful practices. Placing a ruler accessible to machines also acts as an additional reminder to check proper overlaps.

In view of current conditions there cannot be too many such reminders, if packagers are to make their materials supplies go as far as possible.

Any packager who went through World War II shortages will tell you there is not much you can do to conserve metal except not to use it. An allocation may be made to stretch a little farther by resort to larger-sized containers where feasible, but experience has shown this is contrary to consumer preferences.

Glass, of course, is often the only satisfactory alternate, but here again the problem is difficult, because if metal is short, then the supply of glass may quickly become short, too, due to increased demand. However, the glass-container industry has nearly doubled its capacity the last 10 years and at present has a cushion of 42% excess capacity over actual production, in comparison with a similar cushion in 1940 of only 25%. So there is room today for the glass suppliers to absorb a good bit of overflow from the metal-container field. The soda-ash strikes, which caused some shortage of glass during mid-year, are now settled and the industry expects to be back to normal by March 1. Bear in mind, however, that in any really critical metal shortage, supply of metal closures may be a limiting factor for using glass.

During the last war, hundreds of attempts were made to develop satisfactory substitutes for metal and glass packaging, but—with the exception of a few laminated fibre cans and an isolated instance of paper packaging here and there—nothing has yet been found to take the place of these old stand-bys. Practically every prewar user of metal packages went right back to metal as soon as steel or tin was again available. There have been striking examples of tin conservation for certain purposes through the use of special coatings and the electrolytic method of can manufacture, but these have not basically altered the demand for the essential ingredient—steel.

Conservation of shipping containers brings up the question of resuming reuse practices. During the last war many outstanding savings were made. One large manufacturer re-used 600,-

000 corrugated containers. A large mail order house in just four months made 576,000 shipments to retail stores in re-used containers. A big printing house re-used fibre containers four times and more. A grocery chain re-used 3½ million corrugated containers, saving 3,500 tons of board.

These savings were made by properly sealing and opening the containers so that there was no damage, such as using a wooden paddle to pry open, or by carefully cutting a tape closing.

Success of a re-use program, however, must depend on controlled distribution of the containers to see that they get back to the original users or are saved properly for resale as suggested in a voluntary plan proposed by the old WPB during the last war.

The whole problem of alternates, substitutes and re-use is a question that deserves special study. The chief concern right now is to eliminate the wasteful practices that are eating into the allotted quantities of supplies still available to everyone. The place to start is in your own packaging department today.

CREDITS: *Sterling "Salad Festival" box, Paragon Box Corp., Brooklyn. Carling's shipping case, Robert Gair Co., Inc., New York.*

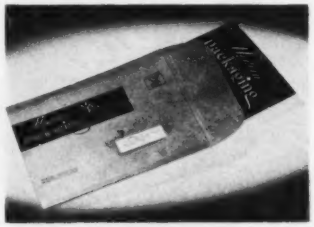
Sterile canning

A new, improved process for sterilizing cans and sealing covers on canned products under aseptic filling and sealing conditions, patented by Continental Can Co., is said to increase bacteria destruction in cans prior to filling and decrease time loss in sealing.

The technique incorporates a direct method of injecting steam into empty cans as they are sent to the sterilizing chamber by means of a rotary valve. The method purges cans of air content and increases the rate of bacteria destruction in the cans, according to Continental, eliminating the entrance of germ-bearing air into the closed sterile system. Can covers are brought into the chamber with each can and sterilized by the steam process. Sterile covers are clinched to sterile cans inside the filling chamber. After covers have been clinched into place, cans may be removed from the chamber and the sealing operation completed without danger in the open atmosphere, eliminating the need for complicated closing equipment inside the sterile chamber.

Our new package

For several years MODERN PACKAGING has been endeavoring to find a mailing envelope which would properly protect the magazine through the



extremely rough conditions of present-day mail handling and bring it to your desk in the same perfect condition in which it left our hands.

We believe that the new type of envelope in which this issue of MODERN PACKAGING reached you is the answer to our search.

Our tests indicate that the unique reinforcement of the envelope's edges will do away, for all time, with the broken spines, dog ears and torn pages which have, in the past, too frequently marred our efforts to present the highest-quality product in the business-magazine field. In future months, each issue of MODERN PACKAGING will be mailed in a similar envelope.

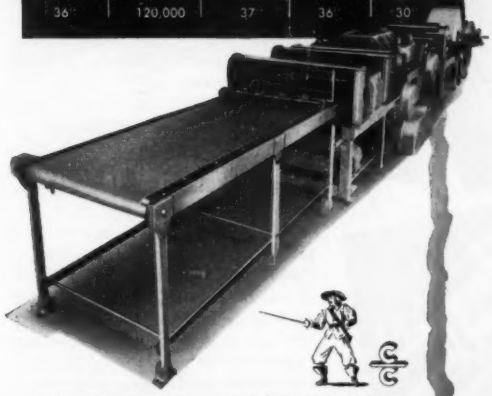
Readers' comments on this new package will be appreciated.

CREDIT: *Envelope supplied by P. L. Andrews Corp., New York.*

Questions, answers

(*Article continued from page 142*)
by water. The surface of the paper is then lightly dry waxed or similarly treated to allow it to peel away from the cheese. The embossed-foil surface is printed on the outside with a one-color design. This wrapper has the advantage of easily conforming to the loaf of cheese and with long overlaps and good end tucks, it achieves sufficient tightness without the use of adhesive or heat sealing. The paper on the inside is well adhered to the foil and yet is capable of absorbing a considerable amount of free whey that might otherwise leak out and cause staining. However, a wrapper of this type will not absorb large amounts of liquid and to be free of staining, it will be necessary for the product to be as free of whey as possible in this or any other type of package.

Model	Maximum Pressure Lbs.	Maximum Web Width Inches	Maximum Die Width Inches	Maximum Die Length
20	40,000	21	20	26
26	80,000	28	27	30
36	120,000	37	36	30



Platen press Quality Cartons at better than cylinder press speeds

This new, revolutionary Champlain Cutting and Creasing Press delivers the highest quality cartons at production rates that are increased up to 50% over cylinder press speeds. Using a patented feed with reciprocating action, the press handles pre-printed or plain roll stock up to 28 points in thickness. Paper costs are reduced, handling simplified. Accessibility of platen press steel rule and furniture dies facilitates makeready, makes changeover easier. Most carton designs can be automatically stripped. Ask for complete information.

7453

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Champlain manufactures a complete line of rotogravure, aniline, rotary letterpress and allied equipment for packaging and specialty printing.

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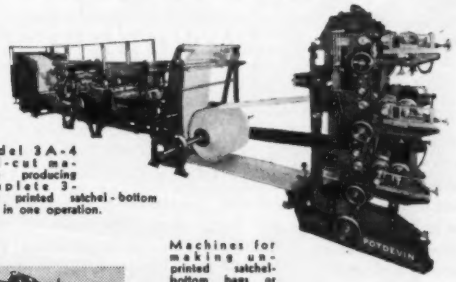

Model 3A-4 roll-cut machine producing complete 3-color printed satchel-bottom sacks in one operation.

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MULTI-WALL TUBER

Machines for making unprinted satchel-bottom bags or printed bags when equipped with a POTDEVIN multi-color aniline press.

Can be equipped with patented double differential compensator and electric eye for converting pre-printed paper. Quick changeover for wide range of sizes for making single or multi-wall poultry, charcoal, potato and flour sacks as well as shopping bags.

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Designers and manufacturers since 1893 of equipment for Bag Making, Printing, Coating, Gluing and Labeling.

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Single Services at Lowest Cost

UNIT SERVICE PACKETS

for all free-flowing solids

Use these convenient modern single service packages and you'll sell more of your product. Experience proves that consumers like the easy way Unit Service Packets give them clean, measured portions of sugar, salt, medicines, hand cleaners . . . in fact, there are Unit Service Packets for all powder or granular products. Costs are amazingly inexpensive!

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Ask for sample Unit Service Packets . . . there's one that's right for your product . . . or we'll design a special model to do the job.

Handy! Sanitary! Ideal

for market testing, sampling, special promotions

UNIT Packet COMPANY

88 Gerrish Ave. Chelsea, Massachusetts

Nitrogen packaging

(*Article continued from page 140*) as shown on the chart. The samples were stored at room temperature under normal daylight exposure for a period of several weeks. It can readily be seen that nitrogen packaging maintained a zero peroxide number for a period of 10 weeks, at which point the curve started to slope upward and reached only the one milliequivalent level at the end of 17 weeks. The air-pack control samples held a non-rancid shelf life for a period of four weeks, after which they became rancid.

The number and variety of food products which benefit from nitrogen packaging is constantly growing. Not all of the products in the following list lend themselves to film packaging, although it is probable that the majority could be packaged in this manner: alfalfa meal, apple juice, butter oil, sour cherries, chicken-noodle-soup mix, dehydrated cabbage, dehydrated carrots, shredded coconut, coffee, cranberry jelly, edible oils and shortening products, cream, dried beef and sandwich meats, powdered eggs, ice-cream mix, mayonnaise, dried milk, nut meats, orange and other citrus juices and powders, dehydrated potatoes, potato chips and similar oil-fried products, liquid vitamins, dry activated yeast.

References

1. Zambito, A. T. (The Linde Air Products Co.), *Food Industries*, Nov., 1949.
2. Bayes, A. L., *Food Technology*, April, 1950.

Jell-O

(*Article continued from page 93*) and found that they came to over $6,000,000 for 1933, including $1,750,000 in newspapers, $3,253,007 in consumer magazines and $1,037,679 for radio time (exclusive of talent cost). These figures do not include heavy expenditures on billboards, car cards, samples, displays and other dealer helps. *Fortune* figured that, all told, the 1933 figure might have come to $10,000,000 and that the sum would be the equivalent of half-a-cent for each package of goods sold that year. Probably today's annual expenditures are several times as large and Jell-O—always among the three or four biggest in General Food's list of

New Magazine Will Sell Plastics to Nation's Retailers

55,000 Plastics Buyers To Get First Issue of "Plastics Merchandising" Next January

NEW YORK, N. Y., Nov. 9.—"Plastics Merchandising," a new monthly tabloid-style magazine aimed at an important retail market hitherto unserviced by any journal of its own, will begin publication in January, 1951, it was recently announced by Charles A. Breskin, president of Breskin Publications and publisher of "Modern Plastics" and "Modern Packaging" magazines.

With a guaranteed minimum circulation of 55,000 copies directed to buyers of all types of plastics merchandise in variety, chain, department, drug and other large volume retail outlets, the new magazine will provide a complete monthly picture of new plastics items, of currently successful retail plastics promotions and of newly developed merchandising techniques. This editorial pattern has been tailored to fit the special needs of buyers as shown by surveys in New York, Boston, Detroit, San Francisco, Chicago and other major retail centers.

The reading needs of buyers also dictated the new publication's handsome format that combines the news and feature arrangements of a newspaper with high quality paper and full-color printing.

Industry Pledges Support

Representative companies in the plastics industry have been quick to endorse the objectives of the new publication. In many cases the support has taken the form of large scale advertising campaigns. Formal contracts for full advertising schedules have already been placed by sixty leading companies including plastics material manufacturers, proprietary molders and plastic-film converters.

Full Details Available

Manufacturers of plastics products can obtain complete details about the market provided by "Plastics Merchandising" and its advertising rates by writing to Advertising Department, Plastics Merchandising, Inc., 122 East 42nd Street, New York 17, N. Y.

20-odd famous brands of food products—has always received its share.

The *Fortune* article advances an interesting theory about the technique of holding leadership in a huge-volume, low-profit, bitterly competitive field like the packaged-foods market. It suggests that General Foods "has a tiger by the tail and cannot let it go. It *cannot* let its volume slip. If it must choose between profits and volume, then its choice is—reluctantly, God knows—volume; for a declining volume means that grocers' shelves are being filled up by competing products, put out at a lower price by smaller companies; that the housewife is becoming forgetful of the trademark and inclining to buy merely on price. The precious franchise is in danger and more advertising, more selling, must be rushed in to protect it and to bring the volume back."

Right now Jell-O is being supported by two popular evening radio shows, "The Aldrich Family" and "My Favorite Husband," with Lucille Ball; one daytime radio serial, "Portia Faces Life," and "The Aldrich Family" on television, where the famous package makes a visual appearance. Consistently, Jell-O advertisements are appearing in *Good Housekeeping, McCall's, Women's Home Companion, This Week* and *Farm Journal*.

Jell-O's advertising budgets in recent years are reputed to have run in excess of $2,000,000 annually. According to publishers' estimates (not confirmed by the company), a total of $1,798,833 was spent in 1949 for advertising of Jell-O gelatin desserts alone, of which the lion's share—$1,428,403—went to radio. Of the 1949 total, $283,350 was expended on general magazines; $35,600 in farm magazines; $116,833 in newspapers and $51,480 on television. In addition, there is reported to have been in the same year a total advertising expenditure of $381,114 for Jell-O puddings and a separate television billing of $68,515 for the combined Jell-O products.

Jell-O in the famous red-letter package continues to forge ahead of all competitors not only as the largest-selling prepared dessert, but as one of the best known and most popular products in the whole field of packaged grocery specialties. Literally billions of packages have been sold since the turn of the century. And this has been made possible by a packaged unit that brings convenience, variety and economy to the American housewife.

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Modern Packaging reserves the right to accept, reject or censor classified copy.

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FOR SALE: 1 Lodgeman Bailer—up stroke. Makes 1400 to 1600 lb. bale, excellent shape. 1 Potdevin Varnishing Machine with auto. feeder (Dexter Pill) with steam heated ovens for 42" x 58" sheet size. 1 Shopping Bag Stitching Machine, which stitches and makes a handle, all in one operation. Made by Saranac Mach. Co., New. 5 Floor Levelators. 1 8-roll Parry Lining Machine. 1 small Staude Gluer, Jr. 91 feet section of conveyor, ideal for waste paper handling. 1 Time Clock System, practically new, consisting of: 1 Time Clock with 5 "in" and 5 "out" racks. 1 Time Clock with 4 "in" and 4 "out" racks. 3 Factory Clocks. 2 Office Clocks. 1 Regulating Unit for correcting time in even power shuts off & operating start & stop horn at predetermined times. Box 129, Modern Packaging.

FOR SALE: 42" wide roll embossing machine. Roller bearing—Vickers Hydraulic pressure system. Total 20 ton pressure. Includes unwind and rewind. Excellent condition. Price right for quick sale. Nylco Products, Inc. Box 174, Clinton, Massachusetts

FOR SALE: 1—Self-adjusting Standard Knapp Gluer-Sealer & Compression unit. Minimum carton 8½" long x 5½" wide x 5½" high, Maximum 15¾" x 11½" x 8½". 2—Ceco Adjustable Carton Gluer Sealers Model A3901-12; 8—Pneumatic Seale Pouch type Tea Bag Machines; 1—Knapp 3B Wraparound Labeler; Pony M, ML, MX Labelrites; Standard Knapp adjustable type D Wraparound Labeler, 202 dia to #10; Burt AU Adjustable Wraparound. World Improved & Model S Spot Labelers; Stokes & Smith Model A Transwrap machine, Miller MPS17, MPUS Cellophane Wrappers; Stokes & Smith S-S G-1 Powder Filler. Only a partial list. Send us your inquiries. CONSOLIDATED PRODUCTS CO. INC., 16-20 Park Row, New York 7, N. Y., Phone: BArclay 7-0600.

TRIANGLE FILLING Machine, Model P-1; 3 Amsco Rotary Bag Sealers Model CL-21G with motors; Ceco Carton Sealer, Model A-3901-12; DeLaval Oil Purifier Centrifuge #620; Dover Steel Evaporator, and Roots Connersville Blower #30. Thompson-Hayward Chemical Co., Kansas City 8, Missouri.

FOR IMMEDIATE DELIVERY. Pneumatic Seale Hi-Speed Auto. Carton Feeder, Bottom and Top Sealer. Stokes & Smith G1, G4 and HG88 Auger Powder Fillers. Triangle Model SHA Auto. Net Weighter and Carton Sealer. Triangle Electri-Pak G2C, G2S and A6CA Fillers. Filler 1, 2, 4 and 8 Head S.S. Fillers. Pony M, ML, MX, MLX Labelrites. Knapp E adj. to 1 gal. Wraparound and Spot Labeler. Ceco Auto. Carton Closing Machine. Standard Knapp 492 Carton Sealer. Pneumatic Seale Auto. Tite-Wrapper. Package FA and FA2O. Scandia Model SUS & SFC Auto. Cellophane Wrappers. This is Only a Partial List. Tell Us Your Requirements. Union Standard Equipment Company, 318-322 Lafayette Street, New York 12, N. Y.

SHEETER-GLUER Wrapping Machine Corley-Miller with electric eye. Paces wrapping, banding or bundling operations. Glues, cuts, and conveys cellophane or paper bands or sheets to wrapping crew. Labor Saving. Good condition. Originally cost $3500, will sell for $1500 fob St. Louis. E. Ruder, Angelica Uniform Co., 1427 Olive St., St. Louis.

SITUATIONS WANTED

SALES MANAGER available after January 1. Now directing sales of printed and converted cellophane, paper specialties and other transparent products to all packaging fields. Excellent sales promotion background, personal sales and executive direction. Desire to make similar or other interesting connection with well rated progressive company. Write Box 130, Modern Packaging.

WORLD WAR II Air Force Supply & Packaging Officer with extensive following in Minneapolis-St. Paul and surrounding trade area can give competent representation to manufacturers of Civilian-Military packaging materials, both Domestic-Over seas. Want these and similar lines: Waterproof papers, liners, tapes. Bags, cans, cartons. Corrosion and rust preventatives, moisture proof barriers. Heat sealing, products cleaning, conveyor equipment. Write Box 131, Modern Packaging.

SUCCESS IN your packaging program depends upon proper procurement. I offer fifteen years experience in purchasing and packaging. Know sources, machines, cartons, bags, papers, films, boxes, printing. How to design, plan and go ahead with a complete packaging program. College graduate in merchandising and advertising. Availability, thirty days. Draft exempt. Write Box 132 Modern Packaging.

SALES ENGINEER representative. Twenty years Manufacturing, Mechanical Design, Industrial Engineering and Plant Management experience, ten years in Sales. Expert in Production and Methods, variety of industries. Desire lines of Packaging or other Equipment, Machinery or Products. Chicago and surrounding territory. Address Simplex Company, Box 384 Evanston Ill.

LAMINATION, EXTRUSION, Coating. Production and development. Experienced as technical director in both electrical and chemical fields. Textiles, papers, films and flexible metals industrial and defense packaging materials and products including pipe and thin polyethylene film. Inorganic and organic resins and rubbers. Can be available for two days per week on permanent basis. Reply Box 999, Modern Packaging.

PAPER BOX EXECUTIVE desires connection with reputable machine made box manufacturer interested in establishing or expanding its hand-made department. Expert designer of perfume, cosmetic, jewelry, silverware, candy and fitted boxes. Simplified production methods, estimating and merchandising. Proven record of ability. Thoroughly experienced. Will locate anywhere. Box 133, Modern Packaging.

HELP WANTED

EXCELLENT OPPORTUNITY. Midwest fabricator looking for man with experience in estimating paper specialties, foil pouches, etc. Our man is probably stymied in one of the larger plants and, if acceptable, would have an opportunity to share in profits. Excellent location and working conditions. Our organization knows of this advertisement—all replies treated confidentially. Give qualifications and full personal information. Reply Box 134, Modern Packaging.

ESTABLISHED PACIFIC Coast manufacturer of transparent acetate boxes, suitable for packaging of candy, nuts, dried fruit, cakes, gift ware, etc., offers attractive commission arrangement for live wire salesmen now calling on manufacturers and packers of these commodities in all western states. Write giving full particulars and territory desired. Plasti-Pak Products, 390 York St., San Francisco 10, Calif.

MECHANICAL ENGINEER. Top-notch man with extensive experience in the design and construction of special-purpose high-speed automatic machinery. Background in printing, packaging and paper-converting equipment. Supervisory experience in drafting-room and machine shop. Capable of responsibility from original design to completed machine. Desire permanent position with forward-looking company requiring designer with inventive talent. Box 136, Modern Packaging.

MISCELLANEOUS

FOR SALE Medium size Folding Box plant. Located in a North Eastern State. Modern efficient equipment and personnel. Large backlog of orders. Good mill connections. For details write Box 135, Modern Packaging.

LAMINATED CELLOPHANE for sale. Available for immediate shipment 40,000 pounds of laminated 300 MSAT DuPont Cellophane in a 10½" web width. Will sell in rolls or will make bags 5" wide by any length desired. The Tape & Ribbon Company, P. O. Box 851, Atlanta, Georgia.

WANTED: Plastic scrap and rejects in any form. Cellulose Acetate, Butyrate, Polystyrene, Vinyl Polyethylene, etc. We pay top prices for clear, colored and printed scrap in any quantity. Box 781, Modern Packaging.

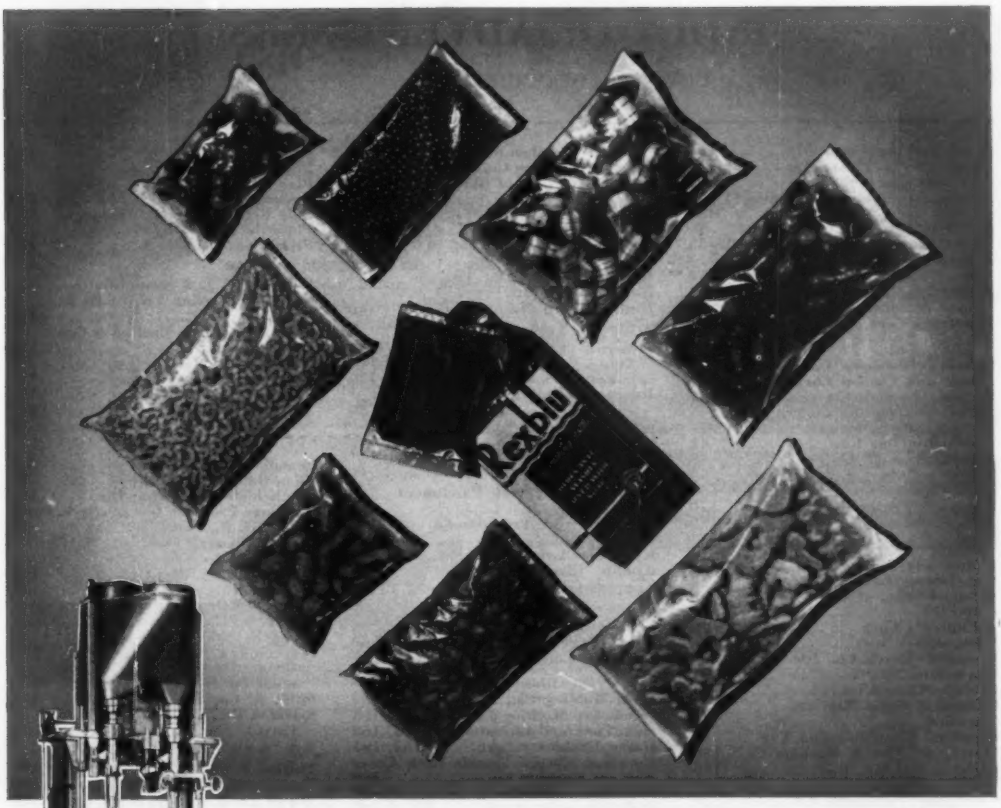
VINYL FILM for sale: Jumbo rolls (300#). .008 clear vinyl film by 50" wide. Material packed in original manufacturer's containers. Approximately 20,000# in lot. Nylco Products Inc. Box 174, Clinton, Massachusetts.

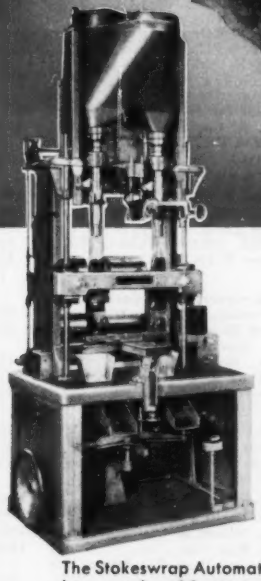
CELLOPHANE. Will buy anywhere in the United States, any quantity of M.S.T. cellophane in rolls of any width, any gauge. Also surplus or misprint printed rolls and unprinted bags. Box 137, Modern Packaging.

All classified advertisements payable in advance of publication

Up to 60 words.....$7.50	Up to 120 words.....$15.00	Up to 180 words.....$22.50
Up to 60 words (boxed)..$15.00	Up to 120 words (boxed).$30.00	Up to 180 words (boxed).$45.00

For further information address Classified Advertising Department, Modern Packaging, 122 E. 42nd St., N. Y. 17, N. Y.





POLYETHYLENE PACKAGES ON STOKESWRAP PACKAGING MACHINES

Some of the products particularly suited for packaging in Polyethylene film are the following:

Soap powders
Bleach and chemical powders
Liquids
Syrups
Creams and pastes
Small metal parts
Air rifle shot
Ball bearings and hardware
Marbles
Frozen foods
Nuts and hard candies
Dehydrated products
Hygroscopic products
Powdered milk products

The Stokeswrap Automatic Packaging Machine has been produced for a number of years for handling various heat sealing films, such as Cellophane, Pliofilm, heat sealing foil, heat sealing papers, etc., and the new machines are now equipped to handle Polyethylene film, either printed or unprinted. Use of Polyethylene films give a stronger package, allowing heavier weights of products to be handled and also giving added protection for many products which heretofore could not be packaged in flexible packages.

Exclusive West Coast Distributor:
Anderson-Barngrover Division of FMC
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STOKES & SMITH Co
PACKAGING MACHINERY — PAPER BOX MACHINERY
Subsidiary of Food Machinery and Chemical Corporation
fmc
Frankford, Philadelphia 24, U. S. A.

INDEX OF ADVERTISERS

DECEMBER, 1950

Modern packaging

A BRESKIN PUBLICATION

Published by Modern Packaging Corp.
122 East 42nd Street, New York 17, N. Y.

Help yourself...

...to bigger sales

(Vuepak boosts ribbon sales 300 per cent!)

Display boxes of Vuepak fabricated by J. E. Sales Corporation for Supreme Ribbon Corp., both New York.

Whatever you sell, wherever you sell it, the chances are Vuepak can help you move it faster... up to six times faster than "blind" packaging materials.

Vuepak salesmanship has been *proved* time after time. One example: the Supreme Ribbon Corporation recently switched from a "picture window" package to one made entirely of Vuepak—Monsanto's rigid, transparent cellulose acetate packaging material. Ribbon sales immediately jumped almost 300%... and have been gaining steadily since.

You too, can afford an improved package for sales-results like this. For Vuepak actually costs less than you might think. And as your sales volume climbs, unit packaging costs are reduced.

So, investigate Vuepak for your package today... for more sales and profit. See your box supplier; or send for your copy of "Package in Plastics," with full information on Vuepak and other Monsanto plastics for packaging. Vuepak: Reg. U. S. Pat. Off.

The coupon is for your convenience.

MONSANTO
CHEMICALS – PLASTICS

SERVING INDUSTRY
... WHICH SERVES MANKIND

MONSANTO CHEMICAL COMPANY,
Plastics Division, Dept. MPKP24, Springfield 2, Mass.

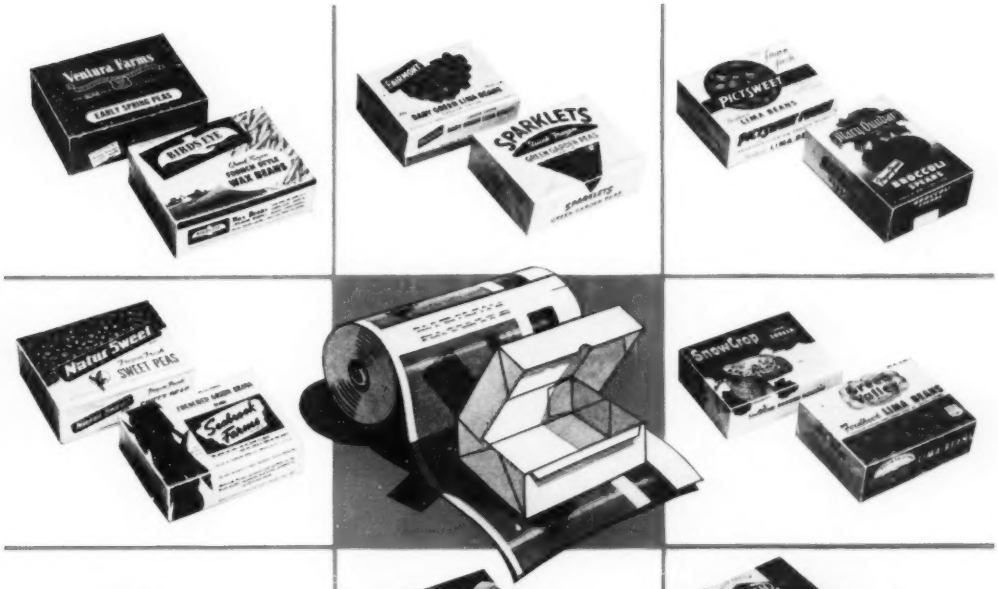
Please send me your booklet, "Package in Plastics."

Name & Title _____

Company _____

Address _____

City, Zone, State _____



pictures that SELL!

. . . and Cartons that PROTECT!

Marathon's colorful TYTON* overwraps make all your frozen foods look so tempting, homemakers pick up *several* instead of one! Appetizing true-color reproductions of foods suggest tasty, easily prepared meals to the shopper. Self-selling package designs . . . executed and roto-printed by Marathon . . . identify *your brand* and each food at a glance. And . . . for sure protection . . . Marathon's snow-white, laminated, frozen food cartons . . . *fit for the finest foods!*

*Registered U. S. Pat. Office

Ask your Marathon salesman or write Marathon Corporation, Menasha, Wis.

Protective Packaging
FOR AMERICA'S FINEST FOODS

MARATHON

this is the Hallmark of

Successful Packaging Creation

SUCCESSFUL • SUCCESSFUL • SUCCESSFUL • SUCCESSFUL • SUCCESSFUL

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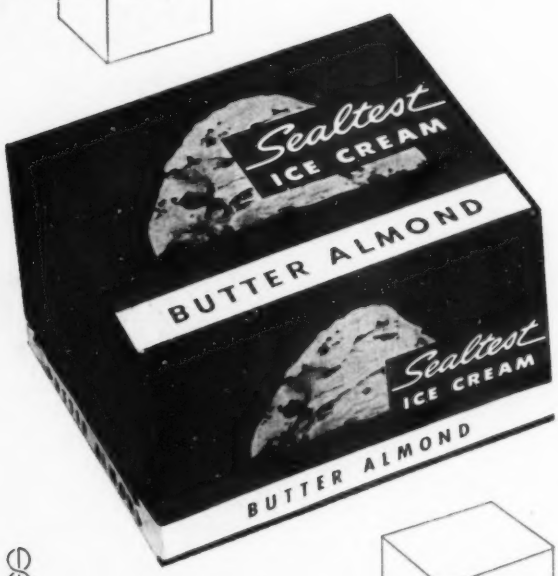

This is a successful packaging creation produced by Shellmar for Sealtest Ice Cream—printed in seven colors on #300 MSAT duPont Cellophane

It appears ONLY on packages produced by Shellmar

This symbol appears inconspicuously on millions of packages distributed throughout the world. Wherever you find it, you'll find a **successful packaging creation . . .** a package distinguished by fine craftsmanship in design, printing and fabrication.

Shortages of flexible packaging materials have limited our current production. But these shortages do not affect our Creative Department. Shellmar artists and designers will gladly cooperate with you in planning a **successful packaging creation** for the future.

MILITARY PACKAGING

Shellmar services and facilities are immediately available to those who are packaging for military needs. Foremost in the development and production of protective packages for World War II, Shellmar offers approved materials and experienced service in this field.

Shellmar
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